SONY

4-240-874-**11**(2)

Super Audio CD/ DVD RECEIVER

Operating Instructions

AVD-S10

© 2002 Sony Corporation

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

To prevent fire, do not Cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

This appliance is classified as a CLASS 1 LASER product. The label is located on the rear exterior.

The following caution label is located inside the receiver.

CAUTION : VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT : SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
VARO ! : NÄKYVÄÄ JA NÄKYMÄTÖN AVATTAESSA OLET ALTTIINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG.
ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
FIGYELEM ! : A BURKOLAT MEGBONTÁSAKOR LÁTHATÓ ÉS LÁTHATATLAN LÉZERSUGÁR LÉPHET KI A KÉSZÜLÉKBÖL. OVAKODUJUN A KÖZVETLEN LÉZERSUGÁRTOL!

Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

Precautions

Safety

- If anything falls into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- The unit is not disconnected from the mains as long as it is connected to the mains outlet, even if the unit itself has been turned off.
- Unplug the unit from the wall outlet if you do not intend to use it for an extended period of time. To disconnect the cord, pull it out by the plug, never by the cord.

Installing

- Allow adequate air circulation to prevent internal heat buildup.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators, or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration, or shock.
- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy objects on the unit.
- If the unit is brought directly from a cold to a warm location, moisture may condense inside the Compact AV System and cause damage to the lenses. When you first install the unit, or when you move it from a cold to a warm location, wait for about 30 minutes before operating the unit.

Welcome!

Thank you for purchasing this Sony Super Audio CD/DVD receiver. Before operating this receiver, please read this manual thoroughly and retain it for future reference.

Precautions

On safety

Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- AC power cord must be changed only at the qualified service shop.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat build-up in the receiver.
- At high volume, over long periods of time, the cabinet becomes hot to the touch. This is not a malfunction. However, touching the cabinet should be avoided. Do not place the unit in a confined space where ventilation is poor as this may cause overheating.
- Do not block the ventilation slots by putting anything on the receiver. The receiver is equipped with a high power amplifier. If the ventilation slots on the top surface are blocked, the unit can overheat and malfunction.
- Do not place the receiver on a soft surface such as a rug that might block the ventilation holes on the bottom.
- Do not place the receiver in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.

On operation

- If the receiver is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the receiver. Should this occur, the receiver may not operate properly. In this case, remove the disc and leave the receiver turned on for about half an hour until the moisture evaporates.
- When you move the receiver, take out any discs. If you don't, the disc may be damaged.
- For power saving purposes, the receiver can be completely turned off by the POWER button on the main unit. Though the LED remains lit for a while, the receiver is completely off.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any questions or problems concerning your receiver, please consult your nearest Sony dealer.

On cleaning discs

Do not use a commercially available CD/DVD cleaning disc. It may cause a malfunction.

On your TV's colour

If the speakers should cause the TV screen to have colour irregularity, turn off the TV at once then turn it on after 15 to 30 minutes. If colour irregularity should persist, place the speakers further away from the set.

IMPORTANT NOTICE

Caution: This receiver is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.

Table of Contents

WARNING 2
Welcome! 2
Precautions 3
About this Manual 6
This receiver Can Play the Following Discs 6
Notes about the Discs 8
Index to Parts and Controls 9
Guide to the Control Menu Display (Magic Pad) 13

Getting Started 15

Quick Overview 15
Unpacking 15
Inserting Batteries into the Remote 16
Step 1: Speaker System Hookup 16
Step 2: Antenna Hookups 19
Step 3: TV Hookups 21
Step 4: Hooking Up the Receiver 22
Speaker Setup 23
Presetting Radio Stations 28

Playing Discs 30

Playing Discs 30
Resuming Playback from the Point Where You Stopped the Disc (Resume Play) 31
Using the DVD's Menu 32
Playing VIDEO CDs with PBC Functions (PBC Playback) 33
Creating Your Own Programme (Programme Play) 34
Playing in random order (Shuffle Play) 36
Playing repeatedly (Repeat Play) 36

Searching for a Scene 38

Searching for a Particular Point on a Disc (Scan, Slow-motion Play) 38
Searching for a Title/Chapter/Track/Index/Scene 39

Viewing Information About the Disc 41

Viewing the Playing Time and Remaining Time on the Front Panel Display 41
Checking the Playing Time and Remaining Time 42

Sound Adjustments 44

Changing the Sound 44
Automatically decoding the input audio signal (Auto Format Decode) 46
Enjoying Surround Sound 46
Using only the front speakers (2 Channel Stereo) 50
Adjusting the level parameters 50

Enjoying Movies 51

Changing the Angles 51
Displaying the Subtitles 52
Checking the Play Information (ADVANCED) 53

Using Various Additional Functions 54

Locking Discs (CUSTOM PARENTAL CONTROL, PARENTAL CONTROL) ... 54

Other Operations 59

Controlling the TV with the Supplied Remote 59
Watching the Video or other Unit 60
Listening to the Radio 61
Using the Radio Data System (RDS) 62
Naming Preset Stations 62

Settings and Adjustments 64

Using the Setup Display 64
Setting the Display or Sound Track Language (LANGUAGE SETUP) 65
Settings for the Display (SCREEN SETUP) 66
Custom Settings (CUSTOM SETUP) 67
Settings for the Speakers (SPEAKER SETUP) 68

Additional Information 72

Troubleshooting 72
Self-diagnosis Function (When letters/numbers appear on the front panel display) 75
Glossary 75
Specifications 78
Language Code List 80
DVD Setup Menu List 81
Index 82

About this Manual

- The instructions in this manual describe the controls on the remote. You can also use the controls on the receiver if they have the same or similar names as those on the remote.
- The icons used in this manual are explained below:

Icon	Meaning	Icon	Meaning
DVD	Functions available in DVD video mode	SA-CD CD	Functions available in Super Audio CD and Audio CD mode
VIDEO CD	Functions available in VIDEO CD mode	CD	Functions available in CD mode
			More convenient features

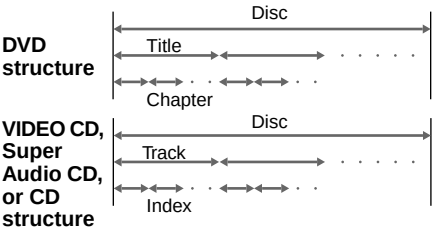
This receiver Can Play the Following Discs

Format of discs	
DVD VIDEO	DVD VIDEO
Super Audio CD	SUPER AUDIO CD
VIDEO CD	COMPACT disc DIGITAL VIDEO
Music CD	COMPACT disc DIGITAL AUDIO TEXT

The “DVD VIDEO” logo is a trademark.

Terms for discs

- **Title**
  The longest sections of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software. Each title is assigned a title number enabling you to locate the title you want.
- **Chapter**
  Sections of a picture or a music piece that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want. Depending on the disc, no chapters may be recorded.
- **Track**
  Sections of a picture or a music piece on a VIDEO CD, Super Audio CD, or CD. Each track is assigned a track number enabling you to locate the track you want.
- **Index (Super Audio CD, CD) / Video Index (VIDEO CD)**
  A number that divides a track into sections to easily locate the point you want on a VIDEO CD, Super Audio CD, or CD. Depending on the disc, no indexes may be recorded.
- **Scene**
  On a VIDEO CD with PBC functions (page 33), the menu screens, moving pictures and still pictures are divided into sections called “scenes.” Each scene is assigned a scene number enabling you to locate the scene you want.



Note on PBC (Playback Control) (VIDEO CDs)

This receiver conforms to Ver. 1.1 and Ver. 2.0 of VIDEO CD standards. You can enjoy two kinds of playback depending on the disc type.

Disc type	You can
VIDEO CDs without PBC functions (Ver. 1.1 discs)	Enjoy video playback (moving pictures) as well as music.
VIDEO CDs with PBC functions (Ver. 2.0 discs)	Play interactive software using menu screens displayed on the TV screen (PBC Playback), in addition to the video playback functions of Ver. 1.1 discs. Moreover, you can play high-resolution still pictures, if they are included on the disc.

Region code

Your receiver has a region code printed on the back of the unit and will only play DVDs labelled with the same region code.

DVDs labelled ALL will also play on this receiver.
If you try to play any other DVD, the message “Playback prohibited by area limitations.” will appear on the TV screen. Depending on the DVD, no region code indication may be labelled even though playing the DVD is prohibited by area restrictions.

Examples of discs that the receiver cannot play

The receiver cannot play the following discs:

- CD-ROMs (PHOTO CDs included)
- All CD-Rs other than music and VCD formatted CD-Rs
- Data part of CD-Extras
- DVD-ROMs
- DVD Audio discs
- A DVD with a different region code (page 7, 77).
- A disc that has a non-standard shape (e.g., card, heart)
- A disc with paper or stickers on it.
- A disc that has the adhesive, cellophane tape, or a sticker still left on it.

Note

Some CD-Rs or CD-RWs cannot be played on this receiver depending upon the recording quality or physical condition of the disc, or the characteristics of the recording device.
Furthermore, the disc will not play if it has not been correctly finalized. For more information, see the operating instructions for the recording device.

Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this receiver plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

Copyrights

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, other intellectual property rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

This receiver incorporates Dolby* Digital, Pro Logic Surround, and the DTS** Digital Surround System.

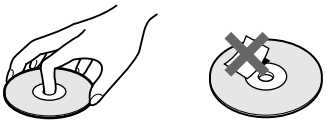
* Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. © 1992-1997 Dolby Laboratories. All rights reserved.

** Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other worldwide patents issued and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. © 1996 Digital Theater Systems, Inc. All rights reserved.

Notes about the Discs

On handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.



- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After playing, store the disc in its case.

On cleaning

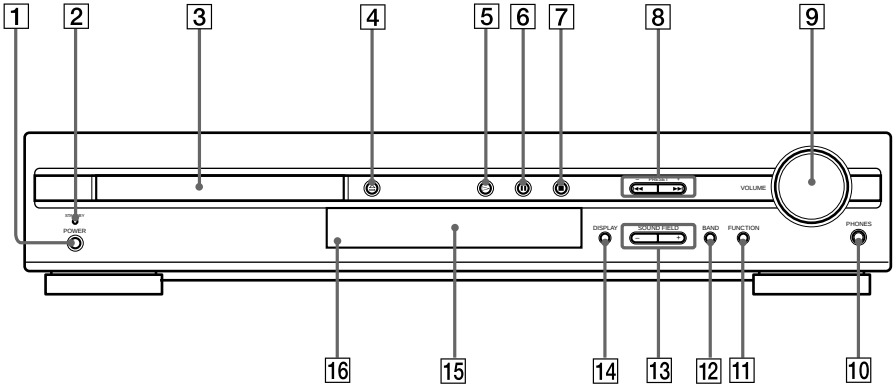
- Before playing, clean the disc with a cleaning cloth.
  Wipe the disc from the centre out.

- Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.

Index to Parts and Controls

For more information, refer to the pages indicated in parentheses.

Front Panel

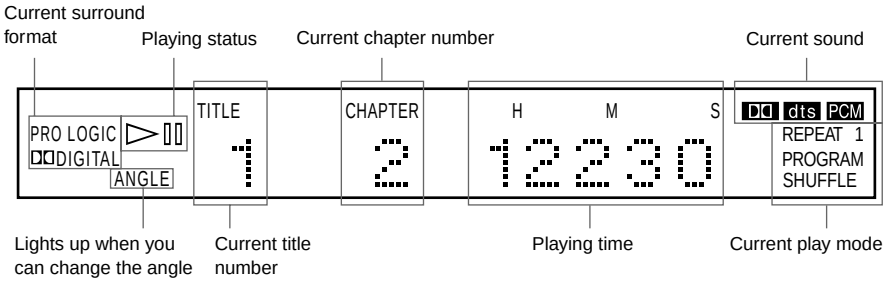


1 POWER switch (30)
2 STANDBY indicator (30)
3 Disc tray (30)
4 ⏏ (open/close) (30)
5 ▷ (play) (30)
6 ❚❚ (pause) (31)
7 ■ (stop) (30)
8 ⏮/⏭, PRESET +/– (28, 31)
9 VOLUME control (30)
10 PHONES jack (30)
11 FUNCTION (60)
12 BAND (28)
13 SOUND FIELD +/– (46)
14 DISPLAY (61)
15 Front panel display (10)
16 (remote sensor) (16)

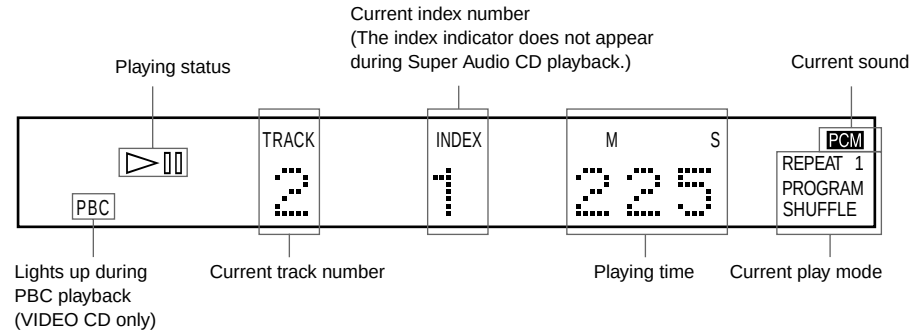
continued

Front Panel Display

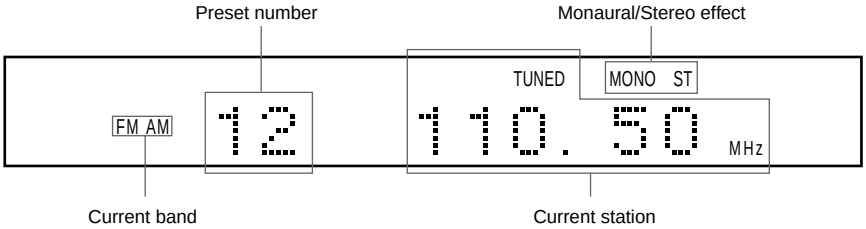
When playing back a DVD



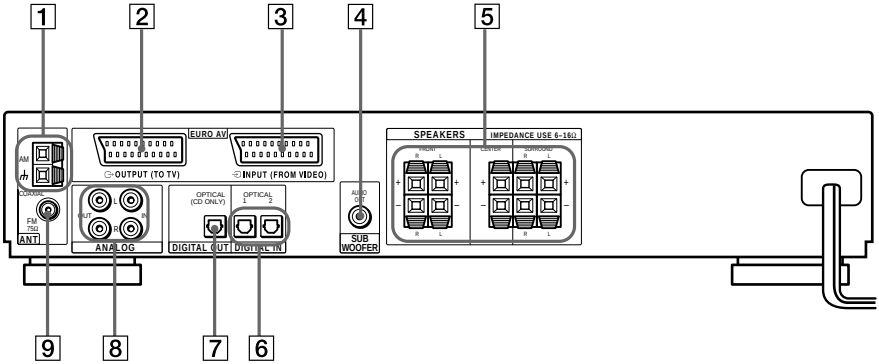
When playing back a Super Audio CD, CD, or VIDEO CD



When listening to the radio



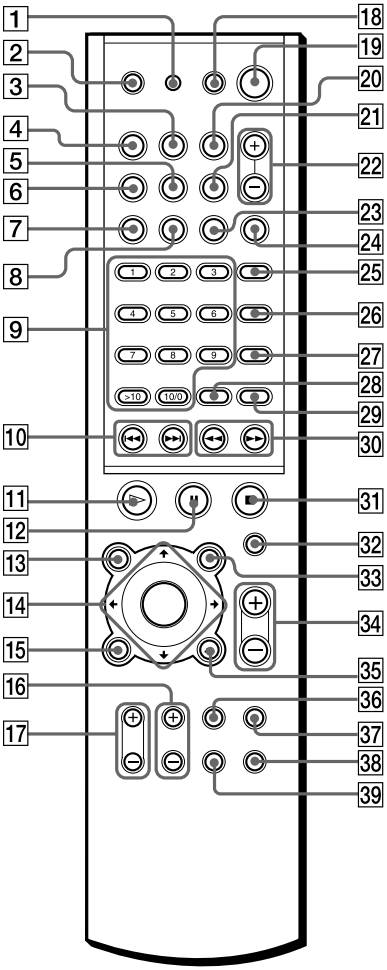
Rear Panel



1 AM antenna (19)
2 ⇨ EURO AV OUTPUT (TO TV) jack (21)
3 ⇦ EURO AV INPUT (FROM VIDEO) jack (22)
4 SUBWOOFER AUDIO OUT jack (17)
5 SPEAKERS jacks (17)
6 DIGITAL IN OPTICAL 1/2 jacks
7 DIGITAL OUT OPTICAL (CD ONLY) jack
8 ANALOG IN/OUT L/R jacks
9 FM 75Ω COAXIAL antenna jack (20)

continued

Remote



Note

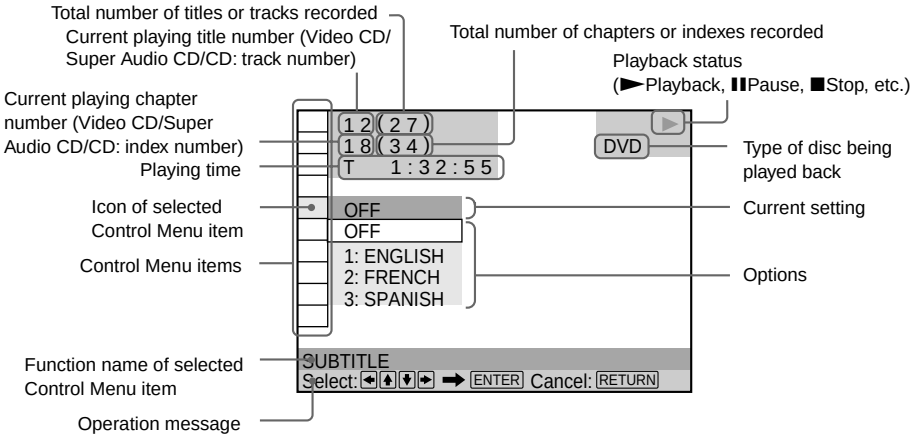
This remote control glows in the dark. However, before glowing, the remote must be exposed to light for awhile.

1 RM SET UP (59)
2 OPEN/CLOSE (30)
3 BAND (28)
4 FUNCTION (60)
5 MEMORY (28)
6 NAME (63)
7 PLAY MODE (34)
8 REPEAT (37)
9 Number buttons (32)
10 I◄◄/►►I, PRESET +/– (28, 31)
11 ▷ (play) (30)
12 ▮▮ (pause) (31)
13 DVD TOP MENU (32)
14 ←/↑/↓/→/ENTER (24)
15 DVD DISPLAY (13, 36)
16 TV CH +/– (60)
17 TV VOL +/– (60)
18 TV I/⏻ (on/standby) (60)
19 I/⏻ (on/standby) (30)
20 STEREO/MONO (61)
21 DISPLAY (61)
22 SOUND FIELD +/– (46)
23 TIME (41)
24 DIMMER (27)
25 AUDIO (44)
26 ANGLE (51)
27 SUBTITLE (52)
28 ENTER
29 CLEAR (35)
30 ◄◄/►► (28, 38)
31 ■ (stop) (30)
32 MUTING (31)
33 DVD MENU (32)
34 VOLUME +/– (30)
35 ↶ RETURN (33)
36 TV/VIDEO (60)
37 AMP MENU (24)
38 DVD SETUP (64)
39 WIDE (60)

Guide to the Control Menu Display (Magic Pad)

Use the Control Menu to select a function that you'd like to use. The Control Menu display appears when the DVD DISPLAY button is pressed. For details, refer to the page in parentheses.

Control Menu



List of Control Menu Items

TITLE (DVD only) (page 39)/ SCENE (only VIDEO CD in PBC playback) (page 39)/TRACK (VIDEO CD only) (page 39)	Selects the title (DVD), the scene (VIDEO CD in PBC playback), or the track (VIDEO CD) to be played.
CHAPTER (DVD only) (page 39)/INDEX (VIDEO CD only) (page 39)	Selects the chapter (DVD) or the index (VIDEO CD) to be played.
TRACK (Super Audio CD/CD only) (page 39)	Selects the track (Super Audio CD/CD) to be played.
INDEX (Super Audio CD/CD only) (page 39)	Selects the index (Super Audio CD/CD) to be played.
TIME/TEXT (page 40)	Checks the elapsed time and the remaining playback time. Inputs the time code for picture and music searching. Displays the DVD or the Super Audio CD/CD text.

continued

AUDIO (page 44)	Changes the audio setting.
SUBTITLE (DVD only) (page 52)	Displays the subtitles. Changes the subtitle language.
ANGLE (DVD only) (page 51)	Changes the angle.
REPEAT (page 36)	Plays the entire disc (all titles/all tracks) repeatedly, or one title/chapter/track repeatedly.
ADVANCED (DVD only) (page 53)	Checks the information (bit rate or layer) on the disc while playing a DVD.
CUSTOM PARENTAL CONTROL (page 54)	Sets the disc to prohibit playing.
SETUP (page 64)	CUSTOM Setup By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. RESET Returns the settings in “SETUP” to the default setting.

Each time you press DVD DISPLAY, the Control Menu display changes as follows:

Control Menu display
↓
ADVANCED display (Appears if you select any setting other than “OFF.” See page 53.)
↓
Control Menu display off

The Control Menu items are different depending on the disc.

The Control Menu icon indicator lights up in green → when you select “REPEAT” unless you set the REPEAT PLAY setting to “OFF.” The “ANGLE” indicator lights up in green only when the angles can be changed.

Quick Overview

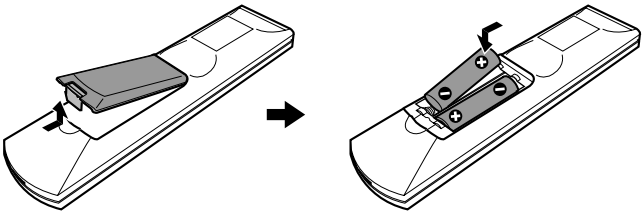
This chapter presents a quick overview so you can begin enjoying your new receiver right away.
For selecting a language used in the on-screen display, refer to page 65.
For selecting the aspect ratio of the TV to be connected, refer to page 66.

Unpacking

Check that you have the following items:
• AM loop antenna (1)
• FM wire antenna (1)
• SCART (EURO AV) cord (1)
• Remote Commander (remote) RM-SP10 (1)
• R6 (size AA) batteries (2)

Inserting Batteries into the Remote

You can control the receiver using the supplied remote. Insert two R6 (size AA) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the compartment. When using the remote, point it at the remote sensor ▣ on the receiver.



Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct light from the sun or lighting apparatus. Doing so may cause a malfunction.
- If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Step 1: Speaker System Hookup

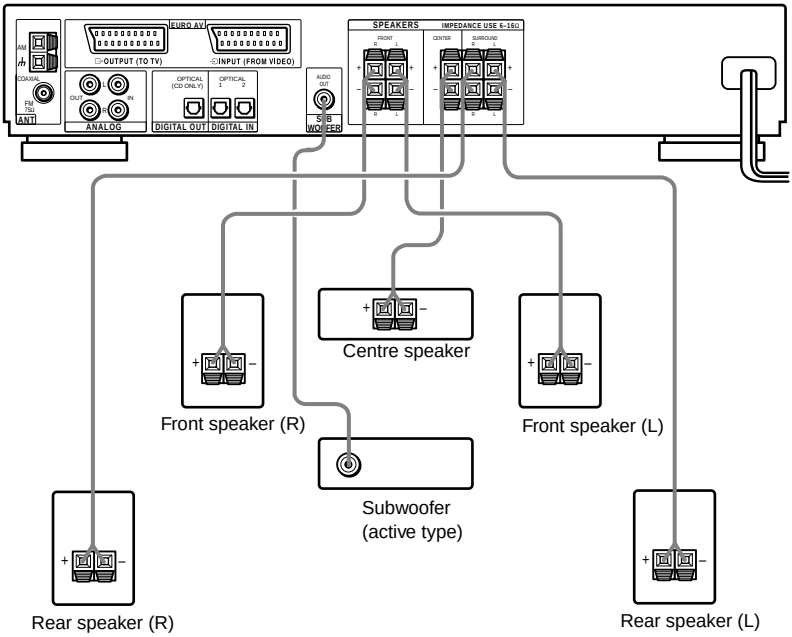
You can enjoy surround sound by connecting 5 speakers (front L/R speakers, centre speaker, rear L/R speakers) and active subwoofer to the receiver. If you do not connect 5 speakers and active subwoofer to the receiver, the receiver optimizes the surround signal depending on the number of connected speakers. When you connect 2 speakers to the receiver, connect the speakers to the SPEAKERS FRONT L/R jacks.

Notes

- Be sure to match the speaker cord to the appropriate terminal: ⊕ to ⊕, ⊖ to ⊖, L to L, and R to R jack.
- Use the high performance speakers.
- Use the same size and performance speakers for the front, centre, and rear speakers.
- To obtain the best possible surround sound, specify the speaker parameters (number, distance, level, etc.) on page 23.

Terminals for connecting the speakers

Connect the	To the
Front speakers	SPEAKERS FRONT L and R terminals
Rear speakers	SPEAKERS REAR L and R terminals
Centre speaker	SPEAKERS CENTER terminal
Subwoofer	SUBWOOFER AUDIO OUT terminal

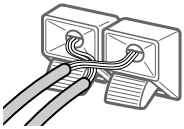


To avoid short-circuiting the speakers

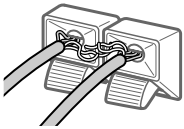
Short-circuiting of the speakers may damage the receiver. To prevent this, be sure to follow these precautions when connecting the speakers. Make sure the bare wire of each speaker cord does not touch another speaker terminal or the bare wire of another speaker cord.

Examples of poor conditions of the speaker cord

Stripped speaker cord is touching another speaker terminal.



Stripped cords are touching each other due to excessive removal of insulation.



After connecting all the components, speakers, and AC power cord (mains lead), output a test tone to check that all the speakers are connected correctly. For details on outputting a test tone, see page 26.

If no sound is heard from a speaker while outputting a test tone, or a test tone is output from a speaker other than the one currently displayed on the front panel display, the speaker may be short-circuited. If this happens, check the speaker connection again.

Notes

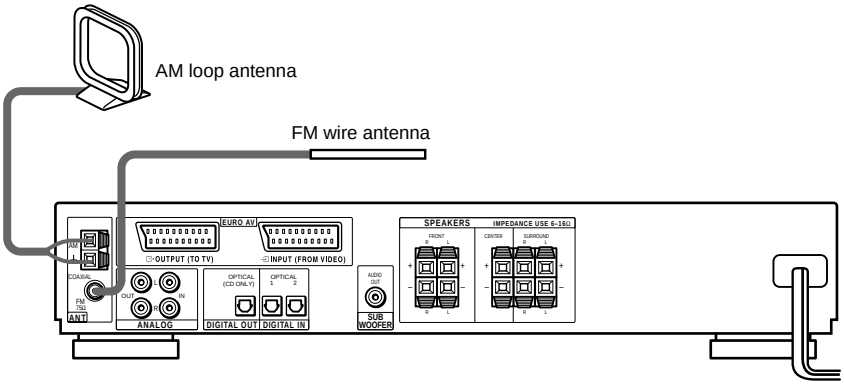
- Be sure to match the speaker cord to the appropriate terminal on the components: ⊕ to ⊕, and ⊖ to ⊖. If the cords are reversed, the sound will be distorted and will lack bass.
- If you use front speakers with low maximum input rating, adjust the volume carefully to avoid excessive output on the speakers.

Step 2: Antenna Hookups

Connect the supplied AM/FM antennas for listening to the radio.

Terminals for connecting the antennas

Connect the	To the
AM loop antenna	AM terminals
FM wire antenna	FM 75Ω COAXIAL terminal



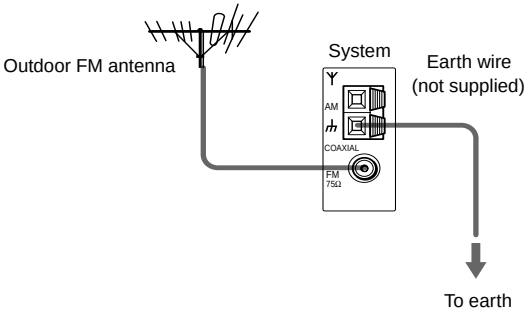
Notes

- To prevent noise pickup, keep the AM loop antenna away from the receiver and other components.
- Be sure to fully extend the FM wire antenna.
- After connecting the FM wire antenna, keep it as horizontal as possible.

continued

If you have poor FM reception

Use a 75-ohms coaxial cable (not supplied) to connect the receiver to an outdoor FM antenna as shown below.



Note

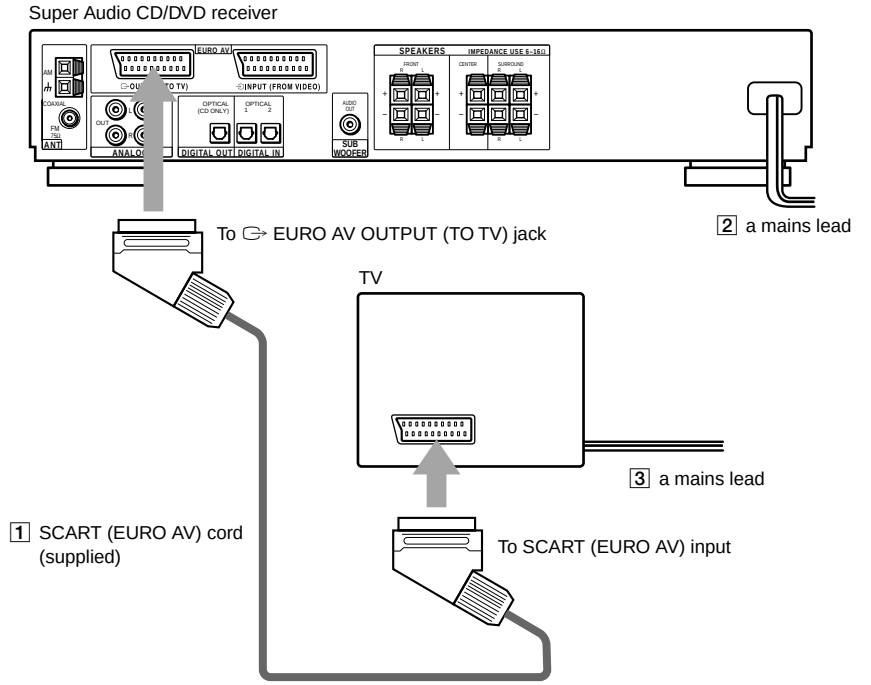
If you connect the receiver to an outdoor antenna, ground it to protect against lightning. To prevent a gas explosion, do not connect the earth wire to a gas pipe.

Step 3: TV Hookups

Connect a SCART (EURO AV) cord (supplied) and mains lead in the order (1 – 3) shown below. Be sure to connect the SCART (EURO AV) cord to the ⇨ EURO AV OUTPUT (TO TV) jack on the receiver. Also, be sure to connect the mains lead last.

Notes

- Plug cords securely to prevent unwanted noise.
- Refer to the instructions supplied with the TV.
- The receiver cannot output the S video signal.
- The receiver cannot output the audio signal of the connected TV. When you listen to the audio signal of the TV by using the connected speakers, input the audio signal of the TV from the ⇦ EURO AV INPUT (FROM VIDEO) jack.



When you connect using the SCART (EURO AV) cord, check that the TV conforms to S video or RGB signals. If the TV conforms to S video, change the input mode of the TV to RGB signals. Refer to the operating instructions supplied with the TV to be connected. Also, when you set “LINE” to “VIDEO” or “RGB” (same as TV) under “CUSTOM SETUP” in the Setup Display (page 67), use a SCART (EURO AV) cord that conforms to each signal.

When connecting to a standard 4:3 screen TV

Depending on the disc, the image may not fit your TV screen.
If you want to change the aspect ratio, please refer to page 66.

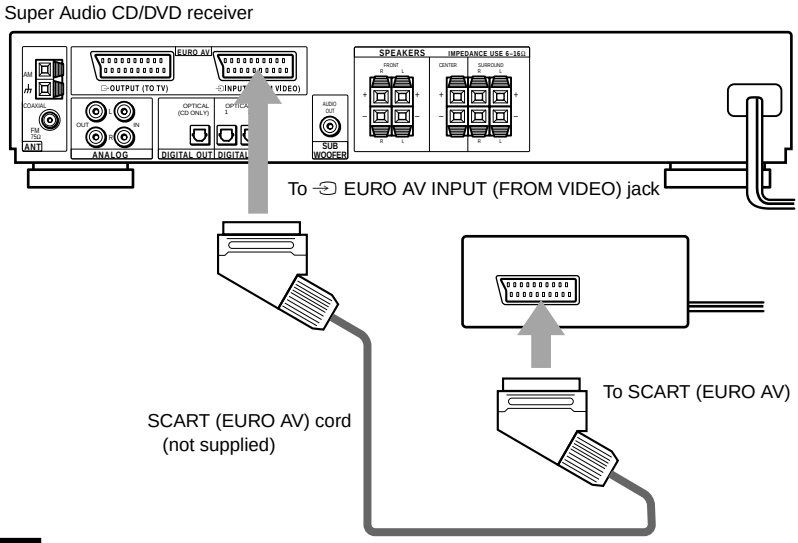
Step 4: Hooking Up the Receiver

Note

Refer to the instructions supplied with the components to be connected.

Connecting the VCR to the receiver

Connect the SCART (EURO AV) cord (not supplied) to the ⇦ EURO AV INPUT (FROM VIDEO) jack. Be sure to make the connections firmly to avoid hum and noise.



Notes

- Do not connect the receiver to a VCR. If you pass the receiver signals via the VCR, you may not receive a clear image on the TV screen.
- If you cannot view the pictures from a VCR through this receiver which is connected to a TV with RGB component jacks, set →▭ to ⇦ (Audio/Video) on your TV. When you select →▭ (RGB), the TV cannot receive the signal from the VCR.
- If you want to use your VCR's SmartLink function, connect the VCR to your TV's SmartLink jack.
- The SmartLink function may not work properly if your VCR is connected to your TV via the SCART (EURO AV) jacks on the receiver.
- When you connect the receiver to your TV via the SCART (EURO AV) jacks, the TV's input source is set to the receiver automatically when you start playback or press any button except for POWER on the receiver or I/⏻ on the remote. In this case, press TV/VIDEO on the remote to return the input to the TV.
- The receiver does not output the S video signal.
- When you select "DVD" by pressing FUNCTION (page 60), the video signal and RGB signal do not output from the ⇦ EURO AV INPUT (FROM VIDEO) jack. Also, the receiver cannot output the S video signal.
- When you select "VIDEO" by pressing FUNCTION (page 60), the audio signal from the ⇦ EURO AV INPUT (FROM VIDEO) jack is output to the connected speakers. The audio signal does not output from the⇨ EURO AV OUTPUT (TO TV) jack.

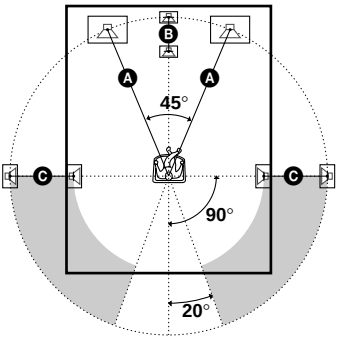
When you play a disc recorded in the NTSC colour system, the receiver outputs the video signal or the Setup Display etc. in the NTSC colour system and the picture may not appear on the PAL colour system televisions. In this case, open the tray and remove the disc.

Speaker Setup

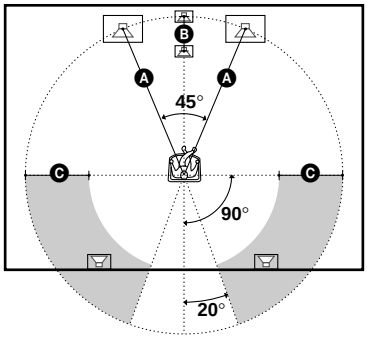
For the best possible surround sound, all the speakers other than the subwoofer should be the same distance from the listening position (A).
However, this receiver allows you to place the centre speaker up to 1.6 meters (5.0 feet) closer (B) and the rear speakers up to 4.6 meters (15.0 feet) closer (C) to the listening position.
The front speakers can be placed from 1.0 to 15.0 meters (3.0 to 50.0 feet) (A) from the listening position.

You can place the subwoofer in any position.
You can place the rear speakers either behind you or to the side, depending on the shape of your room, etc.

When the rear speakers are placed to the side



When the rear speakers are placed behind you



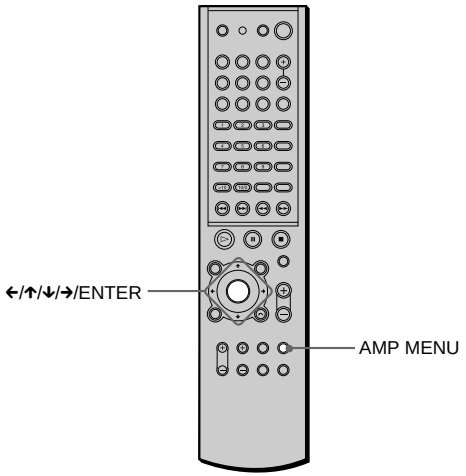
Note

Do not place the centre and rear speakers farther away from the listening position than the front speakers.

Specifying the speaker parameters

To obtain the best possible surround sound, first specify the distance of the speakers from your listening position, then set the balance and level. Use the test tone to adjust the speaker volumes to the same level.
You may adjust the speaker parameters using SPEAKER SETUP in the setup display (page 68).

continued



To specify the size, distance, position and height of the speakers

1 Press AMP MENU repeatedly to display ♪ SP. SETUP on the front panel display.

2 Sit in your listening position and select the item to be set using ↑/↓.
- Items set in ♪ SP. SETUP
  - Size of 5 speakers (front L/R, centre, rear L/R)
  - with or without the subwoofer
  - Distance of the front, rear, and centre speakers
  - Position and height of the rear speakers

3 Set the parameter using ←/→.
The selected parameter will appear on the front panel display.

4 Repeat Steps 2 and 3 to set other parameters in ♪ SP. SETUP.
If you do not operate the remote for a few seconds, the parameter turns off and is stored in the receiver.

■SIZE

When you do not connect centre or rear speakers, or move the rear speakers, set the parameters for F.SP., C.SP., R.SP., and S.W. The default settings are underlined.

- F.SP. (front speaker)
  - LARGE: Normally select this.
  - SMALL: Select this if the small speakers are used for the front speaker.
- C.SP. (centre speaker)
  - LARGE: Normally select this.
  - SMALL: Select this if the small speaker is used for the centre speaker.
  - NO: Select this if no centre speaker is used.

• R.SP. (rear speakers)
– LARGE: Normally select this. Specify the position and height to implement the Digital Cinema Surround modes in the “Virtual” sound field (page 48) properly.
– SMALL: Select this if the small speakers are used for the rear speaker. Specify the position and height to implement the Digital Cinema Surround modes in the “Virtual” sound field (page 48) properly.
– NO: Select this if no rear speakers are used.
• S.W. (subwoofer)
– YES: Select this if the subwoofer is used.
– NO: Select this if no subwoofer is used.

■DISTANCE

You can vary the distance of each speaker as follows. The default settings are underlined.
• F. D. 5 m (17 ft) (front speakers distance)
Front speaker distance can be set in 0.2 meter (1.0 foot) steps from 1.0 to 15.0 meters (3.0 to 50.0 feet).
• C. D. 5 m (17 ft) (centre speaker distance)
Centre speaker distance can be set in 0.2 meter (1.0 foot) steps from the front speaker distance to 1.6 meters (5.0 feet) closer to your listening position.
• R. D. 3.4 m (12 ft) (rear speakers distance)
Rear speaker distance can be set in 0.2 meter (1.0 foot) steps from a distance equal to the front speaker distance to a distance 4.6 meters (15.0 feet) closer to your listening position.

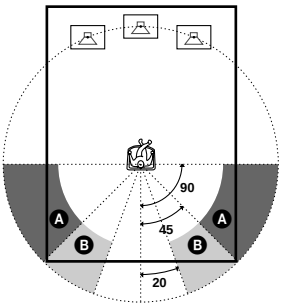
Note

If each of the front or rear speakers are not placed an equal distance from your listening position, set the distance of the closest speaker.

Specifying the rear speaker position and height

If you select anything other than “NO” in “R.SP.,” specify the position and height of the rear speakers. The default settings are underlined.

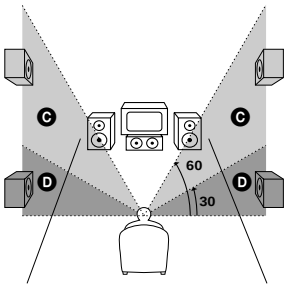
Position diagram



• R. P. BEHIND
Select this if the rear speakers are located in the section B.
• R. P. SIDE
Select this if the rear speakers are located in the section A.

continued

Height diagram



• R. H. LOW
Select this if the rear speakers are located in section D.
• R. H. HIGH
Select this if the rear speakers are located in section C.

These parameters are not available when “R.SP.“ is set to “NO”.

To specify the balance and level of the speakers

1 Press AMP MENU repeatedly to display ♪ LEVEL on the front panel display.

2 Use ↑/↓ to select T.TONE and use ←/→ to set T.TONE to ON.
You will hear the test tone from each speaker in sequence.

3 Sit in your listening position and select the item to be adjusted using ↑/↓.
• Items adjusted in ♪ LEVEL
– Balance of the front and rear speakers
– Volume level of the centre and rear speakers and subwoofer

4 Adjust the volume level so that the volume of the test tone from each speaker sounds the same using ←/→.
The adjusted value will appear on the front panel display.

5 Repeat Steps 3 and 4 to adjust other parameters in ♪ LEVEL.
If you do not operate the remote for a few seconds, the value disappears from the display and is stored in the receiver.

6 Use ↑/↓ to select T.TONE and use ←/→ to set T.TONE to OFF.

■BALANCE

You can vary the balance of each speaker as follows. The default settings are underlined.
• F. .....I..... centre (front speakers)
Adjust the balance between the front left and right speakers (You can adjust from centre, 6 steps left or right).
• R. .....I..... centre (rear speakers)
Adjust the balance between the rear left and right speakers (You can adjust from centre, 6 steps left or right).

■LEVEL

You can vary the level of each speaker as follows. The default settings are underlined.

- C. LEVEL 0 dB (centre speaker level)
  Adjust the level of the centre speaker (you can adjust from –10 dB to +10 dB in 1 dB steps).
- R. LEVEL 0 dB (rear speakers level)
  Adjust the level of the rear speakers (you can adjust from –10 dB to +10 dB in 1 dB steps).
- SW. LEV. 0 dB (subwoofer level)
  Adjust the level of the subwoofer (you can adjust from –10 dB to +10 dB in 1 dB steps).

Notes

- When you select an item, the sound cuts off for a moment.
- Depending on the settings of other speakers, the subwoofer may output excessive sound.

To adjust the volume of all the speakers at one time

Use the VOLUME control.

Other AMP MENU settings

You can control the brightness of the front panel display, clear the preset stations and the station names, and set the speaker parameters back to the default setting. Press AMP MENU repeatedly to display ♪ CUSTOMIZE. Use ↑/↓ to select the following items.

■DIMMER

You can change the brightness of the front panel display by two ways. Use ←/→ to adjust the settings or press DIMMER.

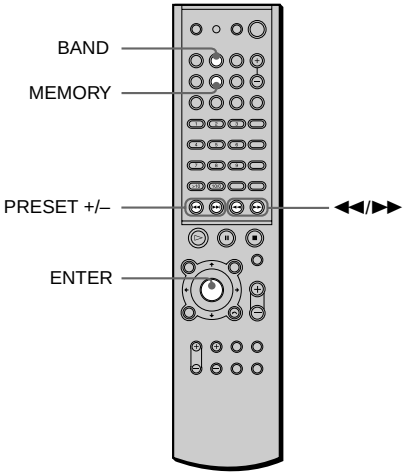
■MEMO. CLR.

You can clear the preset stations and station names, and set the speaker parameters back to the default setting.

- MEMO.CLR.N (No): Press ENTER to skip back to previous menu.
- MEMO.CLR.Y (Yes): If you press ENTER, “Really? N” appears. To clear the memory, use ←/→ to select “Really? Y” and press ENTER. “ALL CLEAR!” is displayed and all settings such as preset stations and station names will be cleared, and speaker parameters will be reset to their default settings.

Presetting Radio Stations

You can preset 20 stations for FM and 10 stations for AM.
Before tuning, make sure to turn down the volume to minimum.



1 **Press BAND repeatedly until the band you want appears on the front panel display.**

Every time you press BAND, the band changes to AM or FM alternately.

2 **Press and hold ◄◄ or ►► until the frequency indication starts to change, then release.**

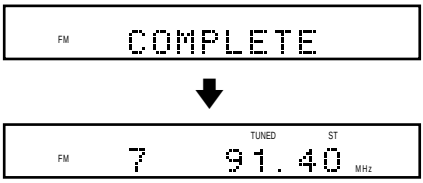
Scanning stops when the receiver tunes in a station. “TUNED” and “ST” (for stereo programme) appear on the front panel display.

3 **Press MEMORY.**

A preset number appears on the front panel display.

4 **Press PRESET + or – to select the preset number you want.**

5 **Press ENTER.**
The station is stored.



6 **Repeat 1 to 5 to store other stations.**

To tune in a station with a weak signal
Press ◀◀ or ▶▶ repeatedly in 2 to tune in the station manually.

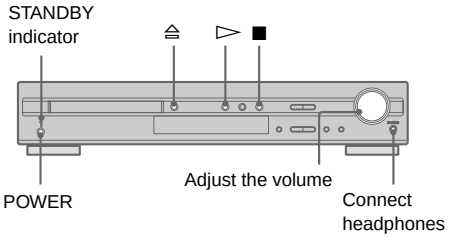
To change the preset number
Start over from 1.

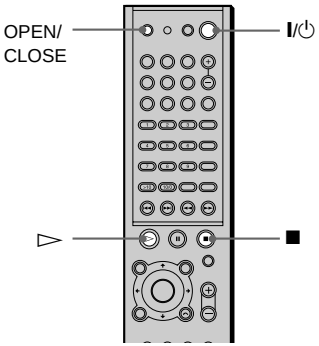
Playing Discs

DVD VIDEO CD SA-CD CD

Depending on the DVD or VIDEO CD, some operations may be different or restricted.

Refer to the operating instructions supplied with your disc.



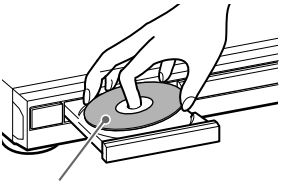


1 **Turn on your TV.**

2 **Switch the input selector on the TV to this receiver.**

3 **Press POWER on the receiver.**
The receiver enters standby mode and the STANDBY indicator lights up in red.

4 **Press ⏏ on the receiver or OPEN/ CLOSE on the remote, and place a disc on the disc tray.**
The receiver automatically turns on and the STANDBY indicator turns off.



With the playback side facing down

5 **Press ▷.**
The disc tray closes, and the receiver starts playback (continuous play). Adjust the volume on the receiver.

After following Step 5

Depending on the disc, a menu may appear on the TV screen. You can play the disc interactively by following the instructions on the menu. DVD (page 32), VIDEO CD (page 33).

To turn on the receiver

Press POWER on the receiver. The receiver enters standby mode and the STANDBY indicator lights up in red. Press I/⏻ on the remote. The receiver turns on and the STANDBY indicator turns off. In standby mode, you can also turn on the receiver by pressing ⏏ on the receiver or by pressing ▷.

To turn off the receiver

Press I/⏻ on the remote. The receiver enters standby mode and the STANDBY indicator lights up in red. To turn off the receiver completely, press POWER on the receiver. While playing a disc, do not turn off the receiver by pressing POWER. Doing so may cancel the menu settings. When you turn off the receiver, first press ■ to stop playback and then press I/⏻ on the remote.

Saving the power in standby mode

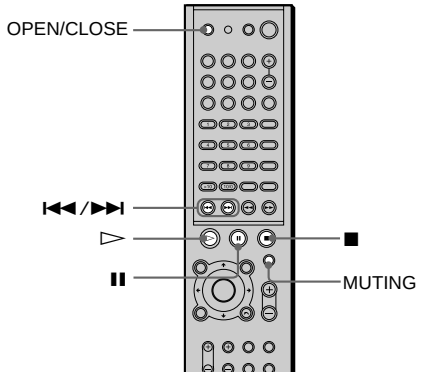
Press I/⏻ on the remote once.

While the receiver is in standby mode, the STANDBY indicator on the receiver lights up.

To cancel standby mode

Press I/⏻ on the remote once.

Additional operations



To	Operation
Stop	Press ■.
Pause	Press II.
Resume play after pause	Press II or ▷.
Go to the next chapter, track, or scene in continuous play mode	Press ⏭.
Go back to the preceding chapter, track, or scene in continuous play mode	Press ⏮.
Stop play and remove the disc	Press OPEN/CLOSE.
Mute the sound	Press MUTING. To cancel muting, press it again or turn up the volume.

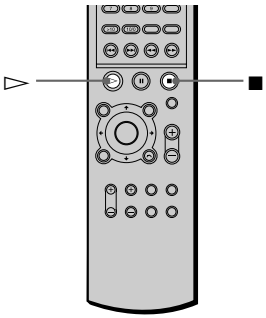
Note

Do not push the disc tray when closing it. Press OPEN/CLOSE to close the disc tray.

Resuming Playback from the Point Where You Stopped the Disc (Resume Play)

DVD VIDEO CD SA-CD CD

When you stop the disc, the receiver remembers the point where you pressed ■ and "RESUME" appears on the front panel display. As long as you do not open the disc tray, Resume Play will work even if the receiver enters standby mode by pressing I/⏻.



1 **While playing a disc, press ■ to stop playback.**

"RESUME" appears on the front panel display, so you can restart the disc from the point where you stopped the disc.
If "RESUME" does not appear, Resume Play is not available.

2 **Press ▷.**

The receiver starts playback from the point where you stopped the disc in Step 1.

To play from the beginning of the disc, press ■ twice, then press ▷.

continued

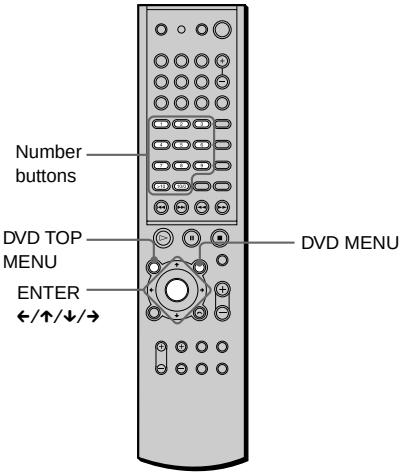
Notes

- Depending on where you stopped the disc, the receiver may not resume playback from exactly the same point.
- The point where you stopped playing is cleared when:
  – you turn the power off by pressing POWER on the receiver.
  – you change the play mode.

Using the DVD's Menu

DVD

A DVD is divided into long sections of a picture or a music feature called "titles." When you play a DVD which contains several titles, you can select the title you want using DVD TOP MENU.
When you play DVDs that allow you to select items such as the language for the subtitles and the language for the sound, select these items using DVD MENU.



1 **Press DVD TOP MENU or DVD MENU.**
The disc's menu appears on the TV screen.
The contents of the menu vary from disc to disc.

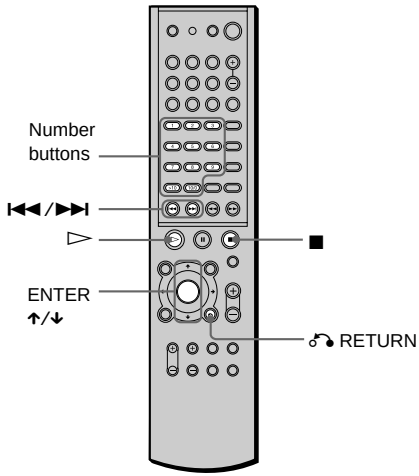
2 **Press ←/↑/↓/→ or the number buttons to select the item you want to play or change.**

3 **Press ENTER.**

Playing VIDEO CDs with PBC Functions (PBC Playback)

VIDEO CD

With PBC (Playback Control) functions, you can enjoy simple interactive operations, search functions, and other such operations. PBC playback allows you to play VIDEO CDs interactively by following the menu on the TV screen.



1 **Start playing a VIDEO CD with PBC functions.**
The menu for your selection appears.

2 **Select the item number you want by pressing ↑/↓ or the number buttons.**

3 **Press ENTER.**

4 **Follow the instructions in the menu for interactive operations.**
Refer to the instructions supplied with the disc, as the operating procedure may differ according to the VIDEO CD.

To go back to the menu

Press RETURN.

To play without using PBC, press I◄◄ / ►►I or the number buttons while the receiver is stopped to select a track, then press ▻ or ENTER.
"Play without PBC" appears on the TV screen and the receiver starts continuous play. You cannot play still pictures such as a menu. To return to PBC playback, press ■ twice, then press ▻.

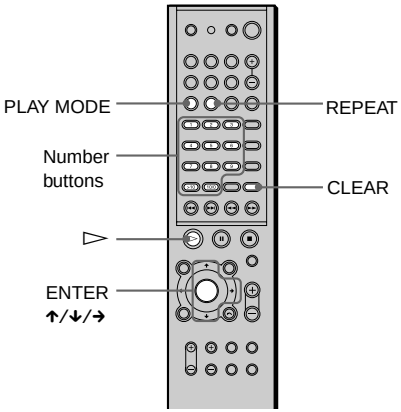
Note

Depending on the VIDEO CD, "Press ENTER" in Step 3 may appear as "Press SELECT" in the instructions supplied with the disc. In this case, press ▻.

Creating Your Own Programme (Programme Play)

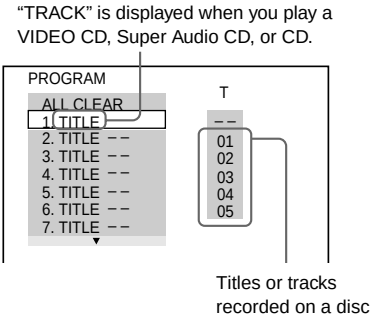
DVD VIDEO CD SA-CD CD

You can play the contents of a disc in the order you want by arranging the order of the titles, chapters or tracks on the disc to create your own programme. You can programme up to 25 titles, chapters, and tracks.



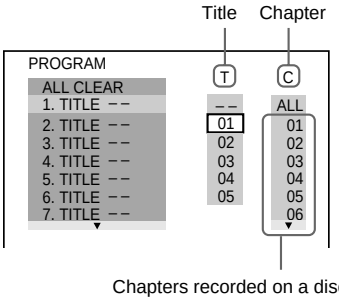
1 In stop mode, press PLAY MODE repeatedly until "PROGRAM" appears on the front panel display.

The programming display appears on the TV screen.



2 Press →.

The cursor moves to the title or track (in this case, "01").

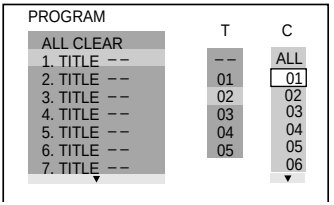


3 Select the title, chapter, or track you want to programme.

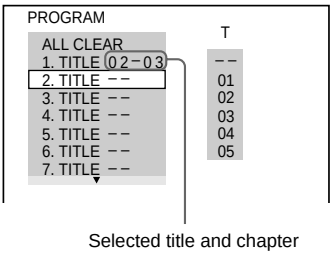
■When playing a DVD

For example, select chapter "03" of title "02."

Press ↑/↓ or the number buttons to select "02" under "T," then press ENTER.

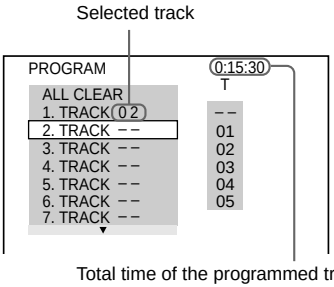


Next, press ↑/↓ or the number buttons to select "03" under "C," then press ENTER.



■When playing a VIDEO CD, Super Audio CD, or CD

For example, select track “02.” Press ↑/↓ or the number buttons to select “02” under “T,” then press ENTER.



4 To programme other titles, chapters, or tracks, repeat Steps 2 to 3.

The programmed titles, chapters, and tracks are displayed in the selected order.

5 Press ▷ to start Programme Play.

Programme Play begins.
When the programme ends, you can restart the same programme again by pressing ▷.

To return to normal play

Press CLEAR during playback.

To turn off the programme menu

In stop mode, press PLAY MODE to turn off the programme menu.

To change the programme

1. In Step 2, select the programme number of the title, chapter, or track you want to change using ↑/↓ or the number buttons, and press →.
2. Follow Step 3 for new programming.

To cancel the programmed order

To cancel all the titles, chapters, or tracks in the programmed order, press ↑, and select “ALL CLEAR” in Step 2. To cancel the selected programme, select the programme using ↑/↓ in Step 2, then press CLEAR, or select “--” in Step 3, then press ENTER.

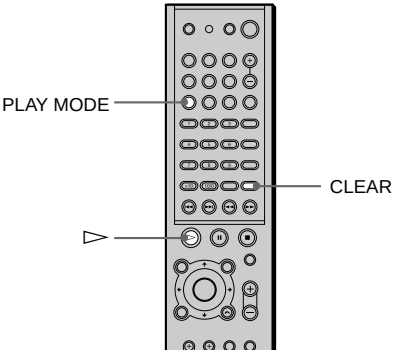
You can do Repeat Play of the programmed titles, chapters, or tracks. Press REPEAT, or set “REPEAT” to “ON” in the Control Menu display during Programme Play.

Note

The number of titles, chapters, or tracks displayed are the same number of titles, chapters, or tracks recorded on a disc.

Playing in random order (Shuffle Play) DVD VIDEO CD SA-CD CD

You can have the receiver "shuffle" titles, chapters, or tracks and play them in random order. Subsequent "shuffling" may produce a different playing order.



1 In stop mode, press PLAY MODE repeatedly until "SHUFFLE" appears on the front panel display.

2 Press ▷.

To return to normal play

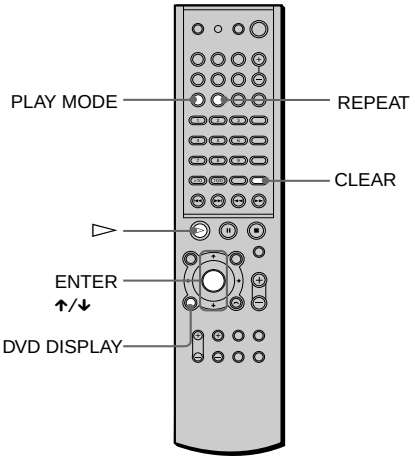
In stop mode, press PLAY MODE twice, or during playback, press CLEAR to return to normal play.

Notes

- Shuffle Play is cancelled when:
  – you open or close the disc tray
  – you turn the power off
  – you change the function
- You may not be able to do Shuffle Play depending on the DVD.

Playing repeatedly (Repeat Play) DVD VIDEO CD SA-CD CD

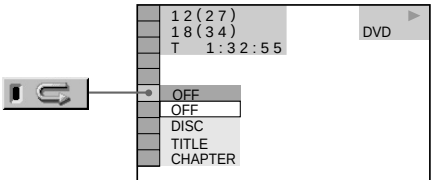
You can play all the titles/tracks or a single title/chapter/track on a disc.
In Shuffle or Programme Play mode, the receiver repeats the titles or tracks in the shuffled or programmed order.
You cannot perform Repeat Play during PBC playback of VIDEO CDs (page 33).
You may not be able to perform Repeat Play depending on the DVD.



1 Press DVD DISPLAY.
The Control Menu appears.

2 Press ↑/↓ to select (REPEAT), then press ENTER.
If you do not select "OFF," the indicator of "REPEAT" lights up in green.

3 Select the Repeat Play setting.



When playing a DVD and when Programme Play is set to OFF

• OFF: does not play repeatedly.
• DISC: repeats all the titles.
• TITLE: repeats the current title on a disc.
• CHAPTER: repeats the current chapter.

When playing a VIDEO CD/Super Audio CD/CD and when Programme Play is set to OFF

• OFF: does not play repeatedly.
• DISC: repeats all the tracks on a disc.
• TRACK: repeats the current track

When Programme Play is set to ON

• OFF: does not play repeatedly.
• ON: repeats Programme Play.

To cancel Repeat Play

Press CLEAR.

You can set Repeat Play during stop mode

After selecting the "REPEAT" item, press ▷.
The receiver starts Repeat Play.

You can quickly display the "REPEAT" status

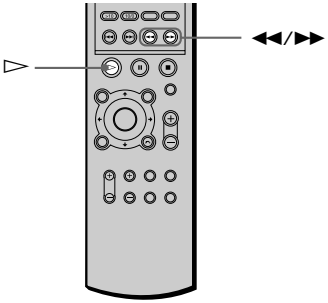
Press REPEAT on the remote.

Note

Repeat play is cancelled when:
– you turn the power off.
– you change the function.

Searching for a Particular Point on a Disc (Scan, Slow-motion Play) DVD VIDEO CD SA-CD CD

You can locate a particular point on a disc quickly by monitoring the picture or playing back slowly.



Note

Depending on the DVD/VIDEO CD, you may not be able to do some of the operations described.

Locating a point quickly by playing a disc in fast forward or fast reverse (Scan)

Press ◀◀ or ▶▶ while playing a disc. When you find the point you want, press ▷ to return to normal speed.
Each time you press ◀◀ or ▶▶ during scan, the playback speed changes. Three speeds are available. With each press, the indication changes as follows:

Playback direction

×2▶ (DVD/Super Audio CD/CD only) → FF1▶▶

↑ FF2▶▶ ←

Opposite direction

×2◀ (DVD only) → FR1◀◀ → FR2◀◀

↑

The ×2▶/×2◀ playback speed is about twice the normal speed. The FF2▶▶/FR2◀◀ playback speed is faster than FF1▶▶/FR1◀◀.

Watching frame by frame (Slow-motion play) DVD VIDEO CD

You can use this function only for DVDs or VIDEO CDs. Press ◀◀ or ▶▶ when the receiver is in the pause mode. To return to normal speed, press ▷.
Each time you press ◀◀ or ▶▶ during Slow-motion play, the playback speed changes. Two speeds are available. With each press, the indication changes as follows:

Playback direction

SLOW 2▶▶ ↔ SLOW 1▶▶

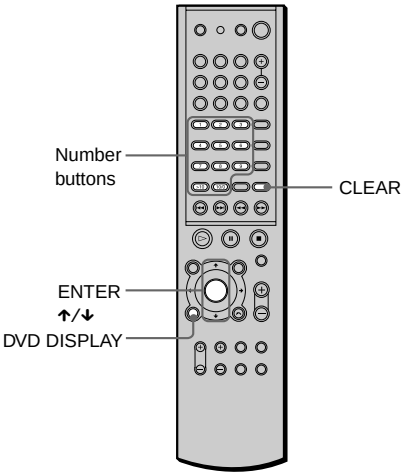
Opposite direction (DVD only)

SLOW 2◀◀ ↔ SLOW 1◀◀

The SLOW 2▶▶/SLOW 2◀◀ playback speed is slower than SLOW 1▶▶/SLOW 1◀◀.

Searching for a Title/ Chapter/Track/Index/ Scene DVD VIDEO CD SA-CD CD

You can search a DVD disc by title or chapter, and you can search a VIDEO CD or CD by track, index, or scene. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a scene using the time code. (TIME SEARCH)



1 Press DVD DISPLAY.

The Control Menu appears.

2 Press ↑/↓ to select the search method.

■When playing a DVD

(TITLE), (CHAPTER), or (TIME/TEXT)

Select TIME/TEXT for TIME SEARCH.

■When playing a VIDEO CD

(TRACK) or (INDEX)

■When playing a VIDEO CD with PBC Playback

(SCENE)

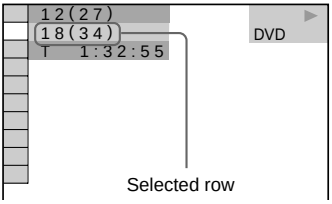
■When playing a Super Audio CD/CD

(TRACK) or (INDEX)

Example: when you select (CHAPTER)

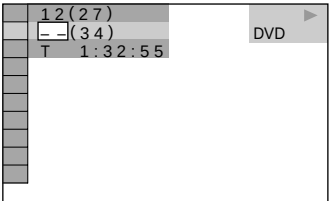
"** (**)" is selected (** refers to a number).

The number in parentheses indicates the total number of titles, chapters, tracks, indexes, or scenes.



3 Press ENTER.

"** (**)" changes to "— (**)".



4 Press ↑/↓ or the number buttons to select the title, chapter, track, index, or scene number you want to search.

If you make a mistake

Cancel the number by pressing CLEAR, then select another number.

continued

5 **Press ENTER.**
The receiver starts playback from the selected number.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

To search for a scene using the time code (TIME SEARCH) (DVD only)

1 In Step 2, select (TIME/TEXT).
"T **:**:**" (playing time of the current title) is selected.

2 Press ENTER.
"T **:**:**" changes to "T --:--:--."

3 Input the time code using the number buttons, then press ENTER.
For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, just enter "2:10:20."

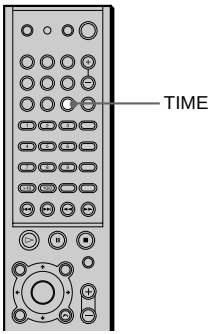
Note

The title, chapter or track number displayed is the same number recorded on the disc.

Viewing the Playing Time and Remaining Time on the Front Panel Display

DVD VIDEO CD SA-CD CD

You can check information about the disc, such as the remaining time, total number of titles of a DVD, or tracks of a Super Audio CD, CD, or VIDEO CD, using the front panel display (page 10).



Press TIME.

Each time you press TIME while playing the disc, the display changes as shown in the following charts.

When playing a DVD

Playing time and number of the current title

TITLE 1 CHAPTER 2 H M S 10324

Remaining time of the current title

TITLE 1 CHAPTER 2 H M S -11536

Playing time and number of the current chapter

CHAPTER 2 H M S 02230

Remaining time of the current chapter

CHAPTER 2 H M S -01320

Text

SONY HITS/

When playing a VIDEO CD (without PBC functions), Super Audio CD, or CD

Playing time and current track number

TRACK 2 INDEX 1 M S 225

Remaining time of the current track

TRACK 2 INDEX 1 M S -150

Playing time of the disc

M S 3212

Remaining time of the disc

M S -2018

Text

SONY HITS/

continued

When playing VIDEO CDs with PBC functions, the scene number and the playing time are displayed.

The playing time and remaining time of the current chapter, title, track, scene, or disc will also appear on your TV screen. See the following section "Checking the Playing Time and Remaining Time" for instructions on how to read this information.

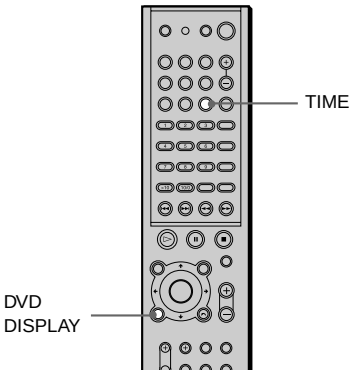
Notes

- While playing Super Audio CD, the index indicator does not appear on the front panel display.
- Depending on the type of disc being played and the playing mode, the disc information may not be displayed.

Checking the Playing Time and Remaining Time

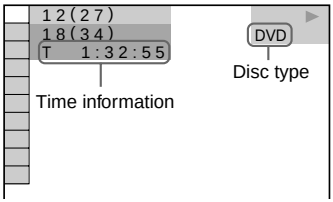
DVD VIDEO CD SA-CD CD

You can check the playing time and remaining time of the current title, chapter, or track, and the total playing time or remaining time of the disc. You can also check the DVD/CD/Super Audio CD text recorded on the disc.



1 **Press DVD DISPLAY during playback.**

The Control Menu appears.



2 Press TIME repeatedly to change the time information.

The display and the kinds of time that you can change depend on the disc you are playing.

■When playing a DVD

- T **:**:**
  Playing time of the current title
- T–**:**:**
  Remaining time of the current title
- C **:**:**
  Playing time of the current chapter
- C–**:**:**
  Remaining time of the current chapter

■When playing a VIDEO CD (with PBC functions)

- **:**
  Playing time of the current scene

■When playing a VIDEO CD (without PBC functions), Super Audio CD, or CD

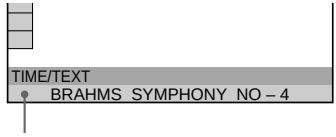
- T **:**
  Playing time of the current track
- T–**:**
  Remaining time of the current track
- D **:**
  Playing time of the current disc
- D–**:**
  Remaining time of the current disc

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Checking the DVD/CD/Super Audio CD text

Press TIME repeatedly in Step 2 to display the text recorded on the DVD/CD/Super Audio CD. The DVD/CD/Super Audio CD text appears only when the text is recorded on the disc. You cannot change the text.



DVD/CD/Super Audio CD text

If the DVD/CD/Super Audio CD text does not fit in a single line, you can see the entire text scrolls across the front display.

You can select the time and text by pressing TIME.

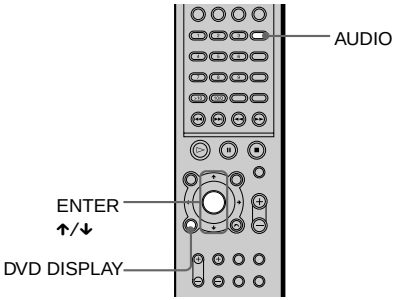
Notes

- Only English words can be displayed.
- In Super Audio CD playback, the receiver can only display a limited number of characters. Also, depending on the disc, not all text characters are not displayed.

Changing the Sound

DVD VIDEO CD SA-CD CD

If a DVD is recorded with multilingual tracks, you can select the language you want while playing the DVD.
If the DVD is recorded in multiple audio formats (PCM, Dolby Digital, MPEG audio, or DTS), you can select the audio format you want while playing the DVD.
With stereo CDs or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. (In this case, the sound loses its stereo effect.)
For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can select the left channel and hear only the instruments from both speakers.

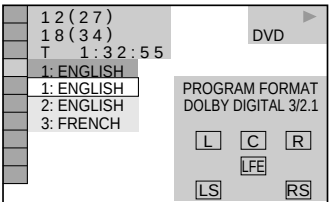


1 Press DVD DISPLAY during playback.

The Control Menu is displayed.

2 Press ↑/↓ to select (AUDIO), then press ENTER.

The options for AUDIO appear.



3 Press ↑/↓ to select the desired audio signal.

■When playing a DVD

Depending on the DVD, the choice of language varies.
When 4 digits are displayed, they represent the language code. Refer to the language code list on page 80 to see which language the code represents. When the same language is displayed two or more times, the DVD is recorded in multiple audio formats.

■When playing a VIDEO CD, or CD

The default setting is underlined.

- STEREO: The standard stereo sound
- 1/L: The sound of the left channel (monaural)
- 2/R: The sound of the right channel (monaural)

■When playing a Super Audio CD

In stop mode, depending on the Super Audio CD, the choice of settings varies.

- MULTI: The disc has multi-channel playback area
- 2CH: The disc has the 2 channel playback area.
- CD: When you want to play the disc as a conventional CD.

Note

Not all discs give you the three choices above when in Super Audio CD playback. It all depends on the layer configuration of the Super Audio CD to be played.

4 Press ENTER.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

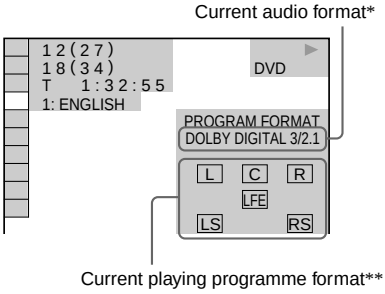
You can select AUDIO directly by pressing AUDIO. Each time you press the button, the item changes.

Note

For discs not in multiple audio format, you cannot change the sound.

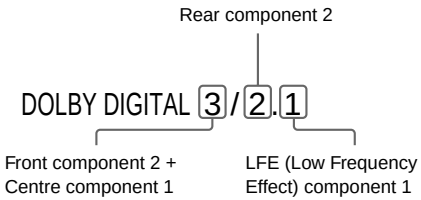
Displaying the audio information of the disc DVD

When you select “AUDIO,” the channels being played are displayed on the screen. For example, in Dolby Digital format, multiple signals ranging from monaural to 5.1 channel signals can be recorded on a DVD. Depending on the DVD, the number of recorded channels may differ.



* “PCM,” “MPEG,” “DTS,” or “DOLBY DIGITAL” is displayed.
For “DOLBY DIGITAL,” the channels in the playing track are displayed numerically as follows:

For Dolby Digital 5.1 ch:



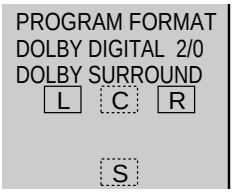
** The letters in the programme format display mean the following sound component:

L: Front (left)
R : Front (right)
C : Centre
LS : Rear (left)
RS : Rear (right)
S : Rear (monaural): The rear component of the Dolby Surround processed signal and the Dolby Digital signal.
LFE : LFE (Low Frequency Effect)

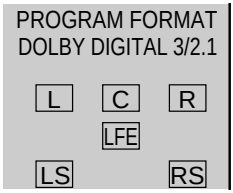
The display examples are as follows:

• PCM (stereo)

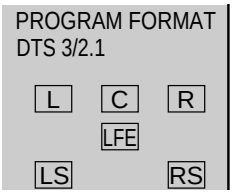
• Dolby Surround



• Dolby Digital 5.1ch
When an LFE signal component is output, “LFE” is enclosed in a solid line. When an LFE signal component is not output, “LFE” is enclosed in a broken line.



• DTS
“LFE” is always enclosed in a solid line regardless of the LFE signal component being output.



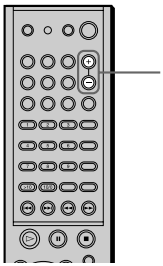
Notes

- When the signal contains rear signal components such as LS, RS, or S, the surround effect is enhanced (page 46).
- If you play MPEG AUDIO sound tracks, the receiver outputs PCM (stereo) signals.

Automatically decoding the input audio signal (Auto Format Decode)

DVD VIDEO CD SA-CD CD

The auto format decode function automatically detects the type of audio signal being input (Dolby Digital, DTS, or standard 2 channel stereo) and performs the proper decoding if necessary. This mode presents the sound as it was recorded/ encoded, without adding any effects (e.g. reverberation).
However, if there are no low frequency signals (Dolby Digital LFE, etc.), it will generate a low frequency signal for output to the sub woofer.



Press SOUND FIELD +/– repeatedly until "A.F.D.(AUTO FORMAT DECODE)" appears on the front panel display.
The auto format decode function is activated.

Enjoying Surround Sound

DVD VIDEO CD CD

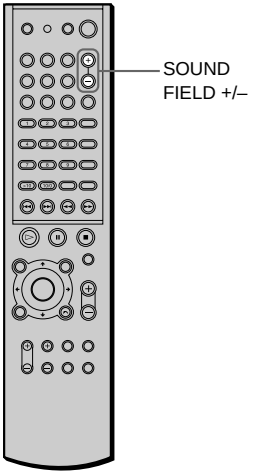
You can take advantage of surround sound simply by selecting one of the receiver's pre-programmed sound fields. They bring the exciting and powerful sound of movie theaters and concert halls into your home. To select the sound field, press SOUND FIELD +/– repeatedly until the sound field you want appears on the front panel display.

Sound field	Display
Normal surround	N.SURROUND
Cinema Studio EX A	C.S.EX.A*
Cinema Studio EX B	C.S.EX.B*
Cinema Studio EX C	C.S.EX.C*
Virtual Multi Dimension	V.MULTI D.
Virtual Semi Multi Dimension	V.S.M.D.
Small Hall	SMALL HALL
Large Hall	LARGE HALL
Jazz Club	JAZZ CLUB
Live House	LIVE HOUSE
Game	GAME

* Use DCS Technology

About DCS (Digital Cinema Sound)

In the collaboration with Sony Pictures Entertainment, Sony measured the sound environment of their studios and integrated the data of the measurement and Sony's own DSP (Digital Signal Processor) technology to develop "Digital Cinema Sound". "Digital Cinema Sound" simulates in a home theater an ideal movie theater sound environment based on the preference of movie director.



Enjoying movies with Cinema Studio EX

Cinema Studio EX is ideal for enjoying the movie software encoded with multi channel format, such as the Dolby Digital DVD. This mode reproduces the sound characteristics of Sony Pictures Entertainment's studios.

Press SOUND FIELD +/– repeatedly until "C.S.EX A (or B, C)" appears on the front panel display.

C.S.EX A (Cinema Studio EX A)

Reproduces the sound characteristics of the Sony Pictures Entertainment "Cary Grant Theater" cinema production studio. This is a standard mode, great for watching most any type of movie.

C.S.EX B (Cinema Studio EX B)

Reproduces the sound characteristics of the Sony Pictures Entertainment "Kim Novak Theater" cinema production studio. This mode is ideal for watching science-fiction or action movies with lots of sound effects.

C.S.EX C (Cinema Studio EX C)

Reproduces the sound characteristics of the Sony Pictures Entertainment scoring stage. This mode is ideal for watching musicals or classic films where music is featured in the soundtrack.

About Cinema Studio EX

Cinema Studio EX consists of the following three elements.

- Virtual Multi Dimension
  Creates 5 sets of virtual speakers surrounding the listener from a single pair of actual rear speakers.
- Screen Depth Matching
  In a movie theater, sound seems to come from inside the image reflected on the movie screen. This element creates the same sensation in your listening room by shifting the sound of the front speakers "into" the screen.
- Cinema Studio Reverberation
  Reproduces the reverberations peculiar to a movie theater.

Cinema Studio EX is the integrated mode which operates these elements simultaneously.

Notes

- The effects provided by the virtual speakers may cause increased noise in the playback signal.
- When listening with sound fields that employ the virtual speakers, you will not be able to hear any sound coming directly from the rear speakers.

Selecting other sound fields

Press SOUND FIELD +/– repeatedly until the sound field you want appears on the front panel display.

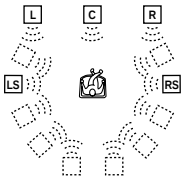
The current sound field appears on the front panel display.

continued

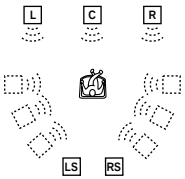
N. SURROUND (Normal Surround)
Software with multi channel surround audio signals is played back according to the way it was recorded. Software with 2 channel audio signals is decoded with Dolby Pro Logic to create surround effects.

V. MULTI D.*
(Virtual Multi Dimension)
Uses 3D sound imaging to create an array of virtual rear speakers positioned higher than the listener from a single pair of actual rear speakers. This mode creates 5 sets of virtual speakers surrounding the listener at approximately a 30° angle of elevation.

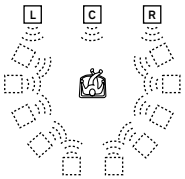
SIDE



BEHIND



V. S. M. D.*
(Virtual Semi Multi Dimension)
Uses 3D sound imaging to create virtual rear speakers from the sound of the front speakers without using actual rear speakers. This mode creates 5 sets of virtual speakers surrounding the listener at a 30° angle of elevation.



SMALL HALL (Small Hall)
Reproduces the acoustics of a small rectangular concert hall.

LARGE HALL (Large Hall)
Reproduces the acoustics of a large rectangular concert hall.
Ideal for soft acoustic sounds.

JAZZ CLUB (Jazz Club)
Reproduces the acoustics of a jazz club.

LIVE HOUSE (Live House)
Reproduces the acoustics of a 300-seat live concert.

GAME (Game)
Obtains maximum audio impact from video game software.

HEADPHONE THEATER (Headphone Theatre)
When you connect your headphone to the PHONES jack of the receiver, the HEADPHONE THEATER mode allows you to experience a theatre like environment while listening through a pair of headphones. This mode is very effective with 5.1 ch discreet signal sources like Dolby Digital and DTS. Selecting any Sound Field selections (except AUTO FORMAT DECODE or 2 CH STEREO) enables the mode.

* "Virtual" sound field: Sound field with virtual speakers.

To turn the surround effect off

Press SOUND FIELD +/– repeatedly until "A.F.D." or "2CH STEREO" appears on the front panel display.

The receiver memorises the last sound field selected for each function mode (Sound Field Link)

Whenever you select a function such as DVD or TUNER, the sound field that was last applied to the function is automatically applied again. For example, if you listen to DVD with SMALL HALL as the sound field, then change to another function, and then return to DVD, SMALL HALL will be applied again. With the tuner, sound fields are memorised separately for all preset stations.

You can identify the encoding format of programme software by looking at its packaging

– Dolby Digital discs are labelled with the DOLBY DIGITAL logo.
– Dolby Surround encoded programmes are labelled with the DOLBY SURROUND PRO · LOGIC logo.
– DTS Digital Surround discs are marked with DTS.

Note

When sound signals with a sampling frequency of 96 kHz are input, the sound signals are output in stereo automatically, and the sound field is turned off.

Adjustable parameters

	FRONT BAL.	REAR BAL.	REAR LEVEL	CENTER LEVEL	SUB WOOFER LEVEL
C.S.EX A	●	●	●	●	●
C.S.EX B	●	●	●	●	●
C.S.EX C	●	●	●	●	●
N. SURROUND	●	●	●	●	●
V.MULTI D.	●	●	●	●	●
V.S.M.D.	●			●	●
SMALL HALL	●	●	●	●	●
LARGE HALL	●	●	●	●	●
JAZZ CLUB	●	●	●	●	●
LIVE HOUSE	●	●	●	●	●
GAME	●	●	●	●	●
HEADPHONE THEATER	●				

Note

Depending on the disc, the audio signal may not output according to the table above. For details, see the instruction manual of the disc.

Using only the front speakers (2 Channel Stereo)

DVD VIDEO CD CD

Press SOUND FIELD +/– repeatedly until "2CH STEREO" appears on the front panel display.

This mode outputs the sound from the front left and right speakers only. Standard 2 channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to 2 channel.

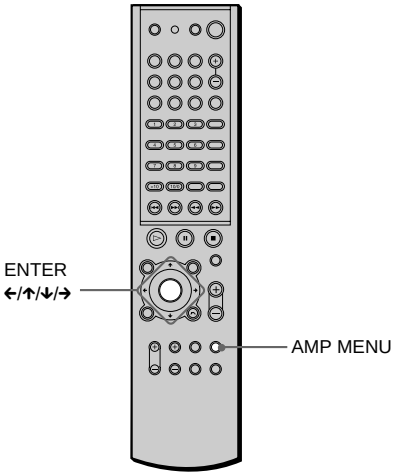
Note

No sound is output from the sub woofer when "2CH STEREO" is selected. To listen to 2 channel (stereo) sources using the front left and right speakers and a sub woofer, press SOUND FIELD +/– repeatedly to select "A.F.D."

Adjusting the level parameters

DVD VIDEO CD SA-CD CD

The level menu contains parameters that let you adjust the balance and speaker volumes of each speaker (page 26).



1 **Start playing a programme source encoded with multichannel surround sound.**

2 **Press AMP MENU repeatedly.**

♪ LEVEL appears on the front panel display.

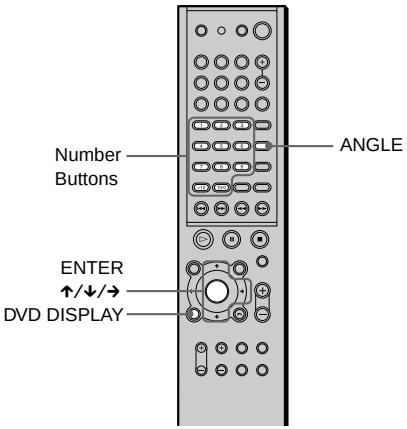
3 **Sit in your listening position and select the item to be adjusted using ↑/↓.**

4 **Adjust the volume level using ←/→.**

The adjusted value will appear on the front panel display. If you do not operate the remote for a few seconds, the value turns off and is stored in the receiver.

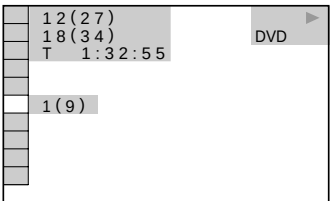
Changing the Angles DVD

If various angles (multi-angles) for a scene are recorded on the DVD, “ANGLE” appears in the front panel display. This means that you can change the viewing angle.
For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train, or from the right window without having the train’s movement interrupted.

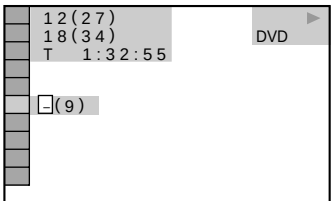


1 **Press DVD DISPLAY during playback.**
The Control Menu appears.

2 **Press ↑/↓ to select (ANGLE).**
The angle number appears.
The number in parentheses indicates the total number of angles.



3 **Press → or ENTER.**
The angle number changes to “-.”



4 **Select the angle number using the number buttons or ↑/↓, then press ENTER.**
The angle is changed to the selected angle.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

You can select the angle directly by pressing ANGLE. Each time you press the button, the angle changes.

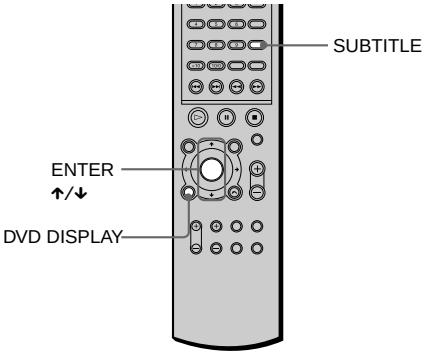
Note

Depending on the DVD, you may not be able to change the angles, even if multi-angles are recorded on the DVD.

Displaying the Subtitles

DVD

If subtitles are recorded on the discs, you can turn the subtitles on and off while playing. If multilingual subtitles are recorded on the disc, you can change the subtitle language while playing, or turn the subtitles on or off whenever you want. For example, you can select the language you want to practice and turn the subtitles on for better understanding.

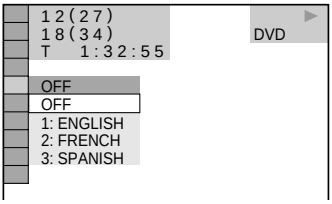


1 **Press DVD DISPLAY during playback.**

The Control Menu appears.

2 **Press ↑/↓ to select (SUBTITLE), then press ENTER.**

The options for SUBTITLE appear.



3 **Press ↑/↓ to select the language.**

Depending on the DVD, the choice of language varies.
When 4 digits are displayed, they indicate the language code. Refer to the language code list on page 80 to see which language the code represents.

4 **Press ENTER.**

To cancel the SUBTITLE setting

Select “OFF” in Step 3.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

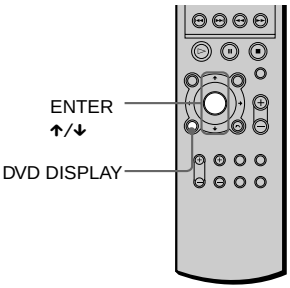
You can select SUBTITLE directly by pressing SUBTITLE. Each time you press the button, the item changes.

Note

Depending on the DVD, you may not be able to change the subtitles even if multilingual subtitles are recorded on it.

Checking the Play Information (ADVANCED) DVD

You can check information such as the bit rate or the disc layer that is being played. While playing a disc, an approximate bit rate of the playback picture is always displayed as Mbps (Mega bit per second) and the audio as kbps (kilo bit per second).

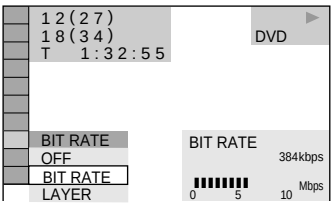


1 **Press DVD DISPLAY during playback.**

The Control Menu is displayed.

2 **Press ↑/↓ to select (ADVANCED), then press ENTER.**

The options for ADVANCED appear.



3 **Press ↑/↓ to select the items.**

For each item, please refer to "Displays of each item."

- BIT RATE: displays the bit rate.
- LAYER: displays the layer and the pick-up point.

4 **Press ENTER.**

To close the ADVANCED window

Select "OFF" in Step 3.

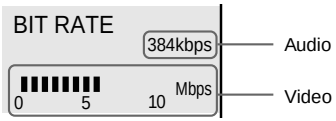
To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

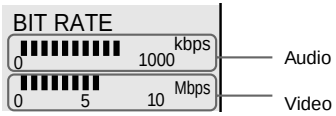
Displays of each item

By pressing DVD DISPLAY repeatedly, you can display either "BIT RATE" or "LAYER," whichever was selected in "ADVANCED."

BIT RATE

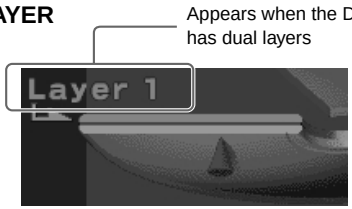


When playing MPEG audio sound tracks



Bit rate refers to the amount of video/audio data per second in a disc. When the bit rate level is high, there is a large amount of data. However, this does not always mean that you can get higher quality pictures or sounds.

LAYER



Indicates the approximate point where the disc is playing.
If it is a dual-layer DVD, the receiver indicates which layer is being read ("Layer 0" or "Layer 1").
For details on the layers, see page 76 (DVD).

Locking Discs (CUSTOM PARENTAL CONTROL, PARENTAL CONTROL)

You can set two kinds of playback restrictions for a disc.

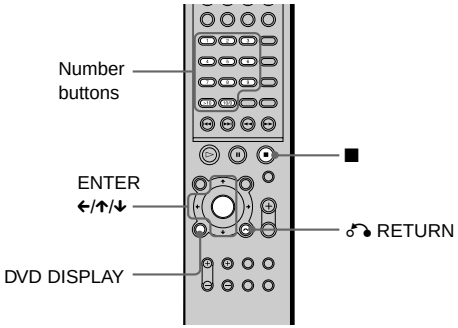
- Custom Parental Control
  You can set the playback restrictions so that the receiver will not play inappropriate discs.
- Parental Control
  Playback of some DVDs can be limited according to a predetermined level such as the age of the users.

The same password is used for both Parental Control and Custom Parental Control.

Custom Parental Control

DVD VIDEO CD SA-CD CD

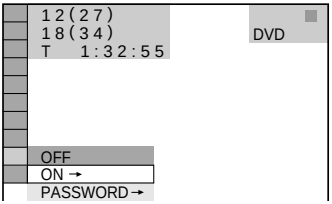
You can set the same Custom Parental Control password for up to 50 discs. When you set the fifty-first-disc, the playback restriction for the first disc is cancelled.



1 **Insert the disc you want to lock.**
If the disc is playing, press ■ to stop playback.

2 **In stop mode, press DVD DISPLAY.**
The Control Menu appears.

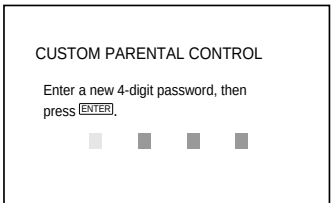
3 **Press ↑/↓ to select (CUSTOM PARENTAL CONTROL), then press ENTER.**
"CUSTOM PARENTAL CONTROL" is selected.



4 **Press ↑/↓ to select "ON →," then press ENTER.**

■When you have not entered a password

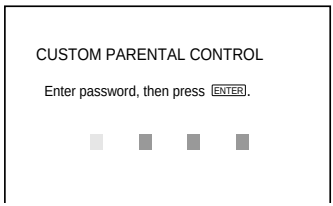
The display for registering a new password appears.



Enter a 4-digit password by using the number buttons, then press ENTER. The display for confirming the password appears.

■When you have already registered a password

The display for entering the password appears.



5 **Enter or re-enter your 4-digit password by using the number buttons, then press ENTER.**
"Custom parental control is set." appears and the screen returns to the Control Menu display.

If you make a mistake entering your password
Press ← before you press ENTER and input the correct number.

If you make a mistake
Press ↩ RETURN, then start from Step 3 again.

To turn off the Control Menu
Press ↩ RETURN, then press DVD DISPLAY repeatedly until the Control Menu is turned off.

To turn off the Custom Parental Control function
1 In Step 4, select "OFF →," then press ENTER.

2 Enter your 4-digit password using the number buttons, then press ENTER.

To change the password
1 In Step 4, press ↑/↓ to select "PASSWORD →," then press ENTER. The display for entering the password appears.

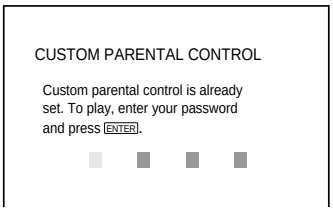
2 Enter your 4-digit password using the number buttons, then press ENTER.

3 Enter a new 4-digit password using the number buttons, then press ENTER.

4 To confirm your password, re-enter it using the number buttons, then press ENTER.

Playing the disc for which Custom Parental Control is set

1 **Insert the disc for which Custom Parental Control is set.**
The CUSTOM PARENTAL CONTROL display appears.

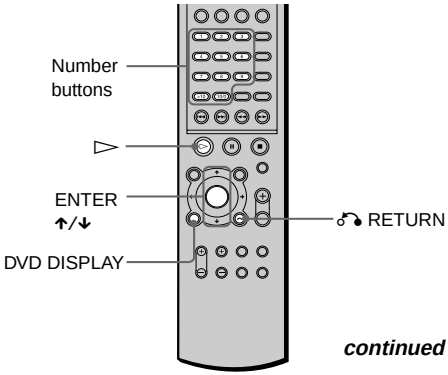


2 **Enter your 4-digit password using the number buttons, then press ENTER.**
The receiver is ready for playback.

If you forget your password, enter the 6-digit number "199703" using the number buttons when the CUSTOM PARENTAL CONTROL display asks you for your password, then press ENTER. The display will ask you to enter a new 4-digit password.

Limiting playback for children (Parental Control) DVD

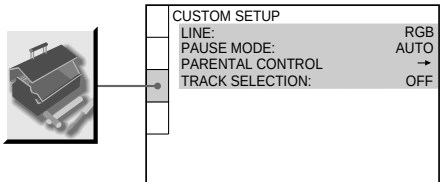
Playback of some DVDs can be limited according to a predetermined level such as the age of the users. The "Parental Control" function allows you to set a playback limitation level.
A scene that is limited is not played, or it is replaced by a different scene.



continued

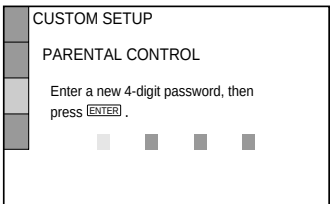
1 **In stop mode, press DVD DISPLAY.**
The Setup Display appears.

2 **Press ↑/↓ to select "CUSTOM SETUP," then press ENTER.**
"CUSTOM SETUP" is displayed.



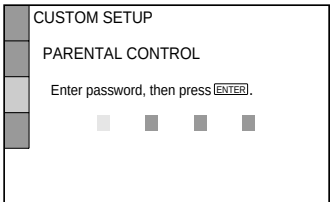
3 **Press ↑/↓ to select "PARENTAL CONTROL →," then press ENTER.**

■If you have not entered a password
The display for registering a new password appears.

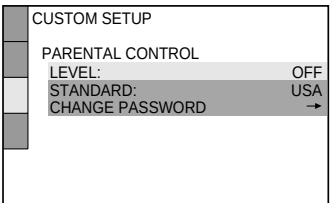


Enter a 4-digit password using the number buttons, then press ENTER.
The display for confirming the password appears.

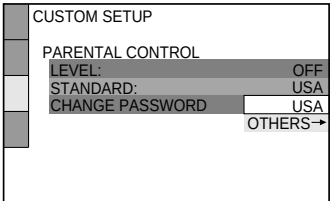
■When you have already registered a password
The display for entering the password appears.



4 **Enter or re-enter your password using the number buttons, then press ENTER.**
The display for setting the playback limitation level and changing the password appears.

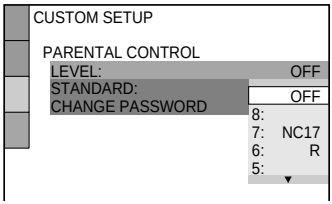


5 **Press ↑/↓ to select "STANDARD," then press ENTER.**
The selection items for "STANDARD" are displayed.

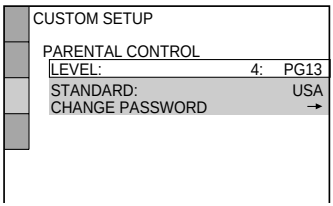


6 **Press ↑/↓ to select a geographic area as the playback limitation level, then press ENTER.**
The area is selected.
If you select "OTHERS →," select and enter the standard code in the table on page 58 using the number buttons.

7 Press ENTER.
The selection items for “LEVEL” are displayed.



8 Select the level you want using ↑/↓, then press ENTER.
Parental Control setting is complete.



The lower the value, the more strict the limitation.

If you make a mistake

Press ↩ RETURN to go back to the previous screen.

To turn off the Setup Display

Press DVD SETUP repeatedly until the Setup Display is turned off.

To turn off the Parental Control function and play the DVD after entering your password

Set “LEVEL” to “OFF” in Step 8.

To change the password

1 In Step 5, select “CHANGE PASSWORD →” using ↓, then press ENTER.
The display for entering the password appears.

2 Follow Step 3 to enter a new password.

Playing the disc for which Parental Control is set

1 Insert the disc and press ▷.
The PARENTAL CONTROL display appears.

2 Enter your 4-digit password using the number buttons, then press ENTER.
The receiver starts playback.

If you forget your password, remove the disc and repeat Step 1 to 5 of “Limiting playback for children.” When you are asked to enter your password, enter “199703” using the number buttons, then press ENTER. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password in Step 3, replace the disc in the receiver and press ▷. When the PARENTAL CONTROL display appears, enter your new password.

Notes

- When you play DVDs which do not have the Parental Control function, playback cannot be limited on this receiver.
- Depending on the DVD, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level. If the Resume Play mode is cancelled, the level returns to the original level.

continued

Area Code

Standard	Code number	Standard	Code number
Argentina	2044	Korea	2304
Australia	2047	Malaysia	2363
Austria	2046	Mexico	2362
Belgium	2057	Netherlands	2376
Brazil	2070	New Zealand	2390
Canada	2079	Norway	2379
Chile	2090	Pakistan	2427
China	2092	Philippines	2424
Denmark	2115	Portugal	2436
Finland	2165	Russia	2489
France	2174	Singapore	2501
Germany	2109	Spain	2149
Hong Kong	2219	Sweden	2499
India	2248	Switzerland	2086
Indonesia	2238	Taiwan	2543
Italy	2254	Thailand	2528
Japan	2276	United Kingdom	2184

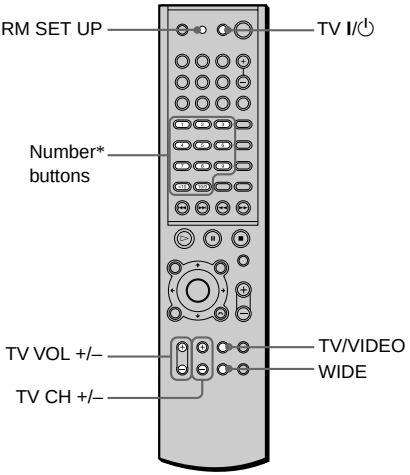
Controlling the TV with the Supplied Remote

By adjusting the remote signal, you can control your TV with the supplied remote.

Notes

- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number may be reset to the default (SONY) setting. Reset the appropriate code number.

Controlling TVs with the remote



1 Press TV I/⏻ while pressing RM SET UP.

The SET UP indicator lights up.

2 Enter your TV's manufacturer's code (see the table) using the number buttons.

The SET UP indicator flashes twice.

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code number
AIWA	17
AKAI	22
AOC	22
CENTURION	28
COLONAD	21
CURTIS-MATHES	28
Daytron	28
EMERSON	21, 22, 30
FISHER	27
FUJITSU	11
FUNAI	14
General Electric	24, 26
GOLD STAR (LG)	21, 22, 32
GRUNDIG	44
HITACHI	04, 21, 51
J.C.Penney	22, 28
JVC	06
KMC	21
LOEWE	56
MAGNAVOX	21, 25, 28
MARANTZ	22, 29
MGA/MITUBISHI	22, 28, 29, 32
NEC	09, 22, 28
NOKIA	47, 48, 58
PANASONIC (MATSUSHITA)	02, 13, 24, 57
Philico	21, 22
PHILIPS	25, 34, 41, 42, 43
PIONEER	10
Portland	21
QUASAR	08, 24
RADIO SHACK	23, 30
RCA	22, 26
SABA	45, 46
SAMPO	28
SAMSUNG	18, 33, 49, 50
SANYO	07, 15, 27, 52
SCOTT	28
SEARS	03, 26, 27
SHARP	08, 16, 21, 23
SONY	01 (default), 12
SYLVANIA	25, 28
TEKNIKA	21, 25, 30
TELEFUNKEN	53
THOMSON	55
TOSHIBA	03, 54
WARDS	21, 22, 28
YORX	28
ZENITH	31

Controlling the TV

You can control your TV using the buttons below.

By pressing	You can
TV I/⏻	Turn the TV on or off.
TV/VIDEO	Switch the TV's input source between the TV and other input sources.
TV VOL +/–	adjust the TV volume.
TV CH +/–	change the TV channel.
WIDE	change the aspect ratio of your TV.

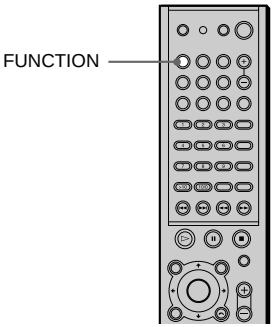
Note

Depending on the TV, you may not be able to control your TV or to use some of the buttons above.

* Use the number buttons only to enter the code number of controllable TVs.

Watching the Video or other Unit

You can use VCR or other units connected to the ⇆ EURO AV INPUT (FROM VIDEO) jack. Refer to the operation manual supplied with the unit for further information on the operation.



Press FUNCTION repeatedly until "VIDEO" appears on the front panel display.

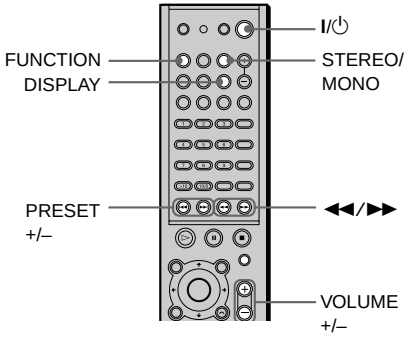
Each time you press FUNCTION, the mode of the receiver changes in the following sequence.
DVD → VIDEO → ANALOG → DIGITAL 1 → DIGITAL 2 → TUNER → DVD...

Note

You can listen to other equipment (cassette deck, satellite tuner, etc.) connected to the receiver by pressing FUNCTION and selecting the connected input.

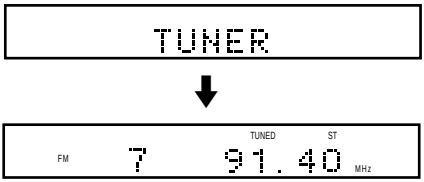
Listening to the Radio

Preset radio stations in the receiver's memory first (see "Presetting Radio Stations" on page 28).



1 **Press FUNCTION repeatedly until "TUNER" appears on the front panel display.**

The last received station is tuned in.



2 **Press PRESET + or PRESET – repeatedly to select the preset station you want.**

Each time you press the button, the receiver tunes in one preset station.

3 **Adjust the volume by pressing VOLUME +/–.**

To turn off the radio

Press I/⏻.

To listen to non-preset radio stations

Use manual or automatic tuning in Step 2.
For manual tuning, press ◀◀ or ▶▶ on the remote repeatedly.
For automatic tuning, press and hold ◀◀ or ▶▶ on the remote.

If an FM programme is noisy

Press STEREO/MONO on the remote so that "MONO" appears on the front panel display. There will be no stereo effect, but the reception will improve. Press the button again to restore the stereo effect.

To improve reception

Reorient the supplied antennas.

To check the frequency or sound field

Press DISPLAY repeatedly.
Each time you press DISPLAY, the front panel display changes as follows:
index name of the station → frequency → sound field → index name of the station

Using the Radio Data System (RDS)

What is the Radio Data System?

Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular programme signal. This tuner offers convenient RDS features such as station name display. RDS is available only for FM stations.*

Note

RDS may not work properly if the station you are tuned to is not transmitting the RDS signal properly, or if the signal strength is weak.

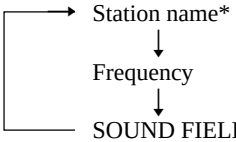
* Not all FM stations provide RDS service, nor do they provide the same type of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

Receiving RDS broadcasts

Simply select a station from the FM band. When you tune in a station that provides RDS services, the station name appears on the front panel display.

To check the RDS information

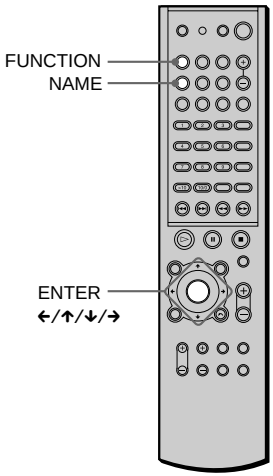
Each time you press DISPLAY, the display changes as follows:



* If the RDS broadcast is not received, the station name may not appear on the front panel display.

Naming Preset Stations

You can enter a name of up to 8 characters for preset stations. These names (for example, “XYZ”) appear on the front panel display when a station is selected.
Note that no more than one name can be entered for each preset station.



1 **Press FUNCTION repeatedly until “TUNER” appears on the front panel display.**

The last station you received is tuned in.
Each time you press FUNCTION, the mode of the receiver changes in the following sequence:
DVD → VIDEO → ANALOG → DIGITAL 1 → DIGITAL 2 → TUNER → DVD...

2 **Tune in the preset station you want to create an index name for.**

If you are not familiar with how to tune in preset stations, see “Listening to the Radio” on page 61.

3 **Press NAME.**

4 **Create an index name by using the cursor buttons:**

Press ↓/↑ to select a character, then press → to move the cursor to the next position.

If you make a mistake

Press ← or → repeatedly until the character to be changed flashes, then press ↓/↑ to select the right character.

5 **Press ENTER.**

To assign index names to other stations

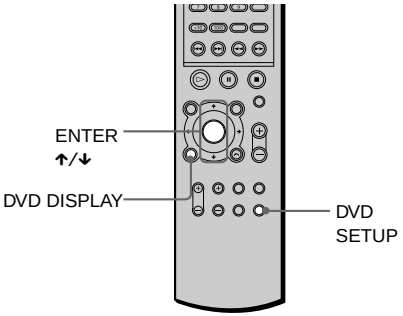
Repeat Steps 2 to 5.

Using the Setup Display

DVD VIDEO CD SA-CD CD

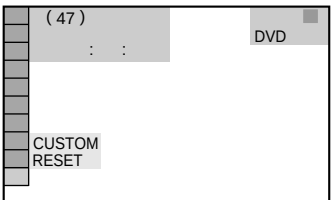
By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item, see page 65-71. For an overall list of Setup Display items, see page 81.

How to use the Setup Display

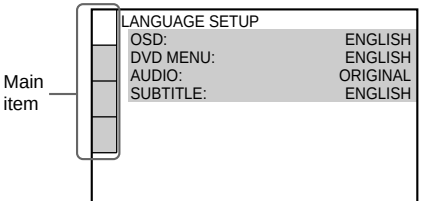


1 **In stop mode, press DVD DISPLAY.**
The Control Menu appears.
If you press DVD SETUP, you can go to Step 3 directly.

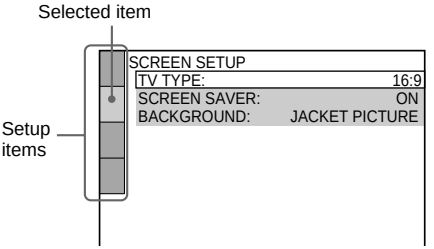
2 **Press ↑/↓ to select (SETUP), then press ENTER.**
The options for SETUP appear.



3 **Press ↑/↓ to select "CUSTOM," then press ENTER.**
The Setup Display appears.

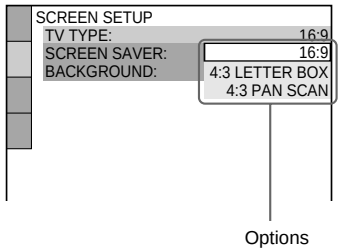


4 **Press ↑/↓ to select the setup item from the displayed list: "LANGUAGE SETUP," "SCREEN SETUP," "CUSTOM SETUP," and "SPEAKER SETUP." Then press ENTER.**
The selected Setup item appears.
Example: "SCREEN SETUP"



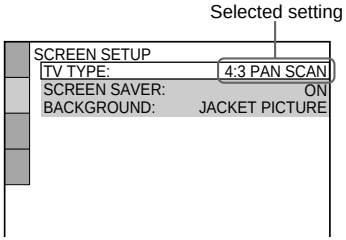
5 **Select an item using ↑/↓, then press ENTER.**

The options for the selected item appear.
Example: “TV TYPE”



6 **Select a setting using ↑/↓, then press ENTER.**

The setting is selected and setup is complete.
Example: “4:3 PAN SCAN”



To turn off the Setup Display

Press DVD SETUP or DVD DISPLAY repeatedly until the Setup Display is turned off.

If you select “RESET” in Step 2, you can reset all of the “SETUP” settings on page 81 (except for PARENTAL CONTROL) to the default settings. After you select “RESET” and press ENTER, select “YES” to reset the settings (it takes a few seconds to complete), or select “NO” and press ENTER to return to the Control Menu. Do not press POWER or I/⏻ when resetting the receiver.

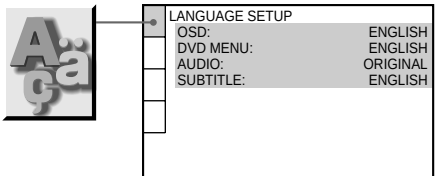
Setting the Display or Sound Track Language

(LANGUAGE SETUP)

DVD VIDEO CD SA-CD CD

“LANGUAGE SETUP” allows you to set various languages for the on-screen display or sound track.

Select “LANGUAGE SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 64).



■OSD (On-Screen Display)

Switches the display language on the screen. Selects the language from the displayed list.

■DVD MENU (DVD only)

Selects the desired language for the DVD menu.

■AUDIO (DVD only)

Switches the language of the sound track. Selects the language from the displayed list. When you select “ORIGINAL,” the language given priority in the disc is selected.

■SUBTITLE (DVD only)

Switches the language of the subtitle. Selects the language from the displayed list. When you select “AUDIO FOLLOW,” the language for the subtitles changes according to the language you selected for the sound track.

continued

If you select “OTHERS →” in “DVD MENU,” “SUBTITLE,” or “AUDIO,” select and enter the language code from the list using the number buttons (page 80).
After you have made a selection, the language code (4 digits) is displayed the next time you select “OTHERS →.”

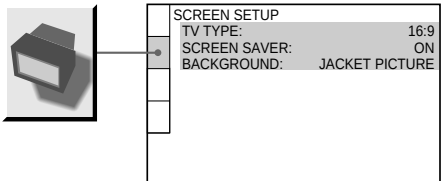
Note

If you select a language that is not recorded on the DVD, one of the recorded languages will be automatically selected (except for the “OSD”).

Settings for the Display (SCREEN SETUP) DVD VIDEO CD SA-CD CD

Choose settings according to the TV to be connected.

Select “SCREEN SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 64).
The default settings are underlined.

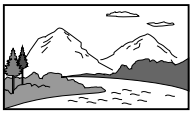


■TV TYPE (DVD only)

Selects the aspect ratio of the connected TV (4:3 standard or wide).
The default settings vary, depending on the country model.

16:9	Select this when you connect a wide-screen TV or a TV with a wide mode function.
4:3 LETTER BOX	Select this when you connect a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 PAN SCAN	Select this when you connect a 4:3 screen TV. Automatically displays the wide picture on the entire screen and cuts off the portions that do not fit.

16:9



4:3 LETTER BOX

4:3 PAN SCAN

Note

Depending on the DVD, “4:3 LETTER BOX” may be selected automatically instead of “4:3 PAN SCAN” or vice versa.

■SCREEN SAVER

Turns the screen saver on and off so that the screen saver image appears when you leave the receiver in pause or stop mode for 15 minutes, or when you play back a CD for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting). Press ▷ to turn off the screen saver.

ON	Turns on the screen saver.
OFF	Turns off the screen saver.

■BACKGROUND

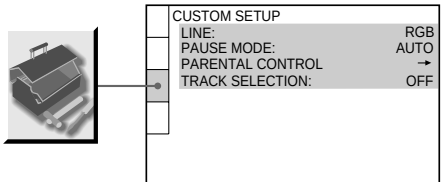
Selects the background colour or picture on the TV screen in stop mode or while playing a CD.

JACKET PICTURE	The jacket picture (still picture) appears in the background, but only when the jacket picture is already recorded on the disc (CD-EXTRA, etc.). If the disc does not contain a jacket picture, the “GRAPHICS” picture appears.
GRAPHICS	A preset picture stored in the receiver appears in the background.
BLUE	The background colour is blue.
BLACK	The background colour is black.

Custom Settings (CUSTOM SETUP) DVD VIDEO CD SA-CD CD

Allows setting up Parental Control and other settings.

Select “CUSTOM SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 64).
The default settings are underlined.



■LINE

Select the method of outputting video signals from the ⇨ EURO AV OUTPUT (TO TV) jack on the rear panel of the receiver.

VIDEO	Outputs video signals.
RGB	Outputs RGB signals.

Note

If your TV does not conform to the RGB signals, no picture appears on the TV screen even if you select “RGB.” Refer to the instructions supplied with your TV.

continued

■PAUSE MODE (DVD only)

Selects the picture in pause mode.

AUTO	The picture, including subjects that move dynamically, is output with no jitter. Normally select this position.
FRAME	The picture, including subjects that do not move dynamically, is output in high resolution.

■PARENTAL CONTROL → (DVD only)

Sets a password and playback limitation level for DVDs with playback limitation for children. For details, see “Limiting playback for children (Parental Control)” (page 55).

■TRACK SELECTION (DVD only)

Gives the sound track having the highest number of channels priority when you play a DVD on which multiple audio formats (PCM, MPEG audio, DTS, or Dolby Digital format) are recorded.

OFF	No priority given.
AUTO	Priority given.

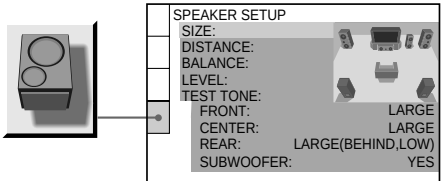
Notes

- When you set the item to “AUTO,” the language may change. The “TRACK SELECTION” setting has higher priority than the “AUDIO” settings in “LANGUAGE SETUP” (page 65).
- If PCM, DTS, MPEG audio, and Dolby Digital sound tracks have the same number of channels, the receiver selects PCM, DTS, Dolby Digital, and MPEG audio sound tracks in this order.
- Depending on the DVD, the audio channel with priority may be predetermined. In this case, you cannot give priority to the DTS, Dolby Digital, or MPEG audio format by selecting “AUTO.”

Settings for the Speakers (SPEAKER SETUP)

To obtain the best possible surround sound, set the size of the speakers you have connected and their distance from your listening position. Then use the test tone to adjust the volume and the balance of the speakers to the same level.

Select “SPEAKER SETUP” in the setup display. For details, see “Using the Setup Display” (page 64).



To return to the default setting

Select the item, then press CLEAR.

■SIZE

When you do not connect centre or rear speakers, or move the rear speakers, set the parameters for FRONT, CENTER, REAR, and SUBWOOFER. The default settings are underlined.

- FRONT
  - — LARGE: Normally select this.
  - — SMALL: Select this if the small speakers are used for the front speaker.
- CENTER
  - — LARGE: Normally select this.
  - — SMALL: Select this if the small speaker is used for the centre speaker.
  - — NONE: Select this if no centre speaker is used.

• REAR
  — LARGE (BEHIND, LOW), LARGE (BEHIND, HIGH), LARGE (SIDE, LOW), LARGE (SIDE, HIGH), SMALL (BEHIND, LOW), SMALL (BEHIND, HIGH), SMALL (SIDE, LOW), SMALL (SIDE, HIGH): Specify the position and height to implement the Digital Cinema Surround modes in the “Virtual Multi Dimension” sound field (page 48) properly.
  — NONE: Select this if no rear speaker is used.
• SUBWOOFER
  — YES: Select this if the subwoofer is used.
  — NONE: Select this if no subwoofer is used.

Notes

- When you select an item, the sound cuts off for a moment.
- Depending on the settings of other speakers, the subwoofer may output excessive sound.

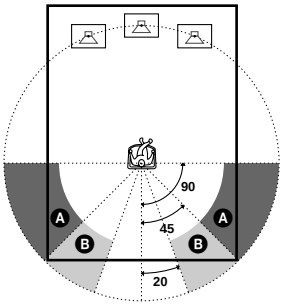
Specifying the rear speaker position and height

If you select anything other than “NONE” in “REAR,” specify the position and height of the rear speakers. The default setting is underlined.

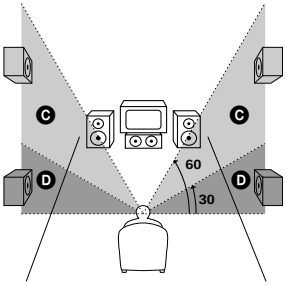
LARGE (BEHIND, LOW), SMALL (BEHIND, LOW)	Select this if the rear speakers are located in section Ⓑ and Ⓓ.
LARGE (BEHIND, HIGH), SMALL (BEHIND, HIGH)	Select this if the rear speakers are located in section Ⓑ and Ⓒ.
LARGE (SIDE, LOW), SMALL (SIDE, LOW)	Select this if the rear speakers are located in section Ⓐ and Ⓓ.
LARGE (SIDE, HIGH), SMALL (SIDE, HIGH)	Select this if the rear speakers are located in section Ⓐ and Ⓒ.

These parameters are not available when “REAR” is set to “NONE.”

Position diagram

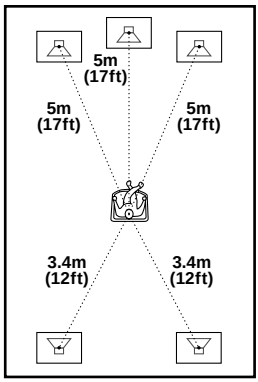


Height diagram



■DISTANCE

The default distance setting for the speakers in relation to the listening position is shown below.



Be sure to change the value in the Setup Display when you move the speakers. The default settings are underlined.

continued

FRONT 5 m/17 ft	Front speaker distance from the listening position can be set in 0.2 meter (1 foot) increments from 1 to 15 meters (3 to 50 feet).
CENTER 5 m/17 ft	Centre speaker distance can be moved up to 1.6 meters (5 feet) forward closer to the listening position, in 0.2 meter (1 foot) increments.
REAR 3.4 m/ 12 ft	Rear speaker distance can be moved up to 4.6 meters (15 feet) closer to your listening position from the front speaker position, in 0.2 meter (1 foot) increments.

Notes

- When you set the distance, the sound cuts off for a moment.
- If each of the front or rear speakers are not placed at an equal distance from your listening position, set the distance according to the closest speaker.
- Do not place the rear speakers farther away from your listening position than the front speakers.

■BALANCE

You can vary the balance of the left and right speakers as follows. Be sure to set “TEST TONE” to “ON” for easy adjustment.
The default settings are underlined.

FRONT CENTRE	Adjust the balance between the front left and right speakers (You can adjust from centre 6 steps left or right).
REAR CENTRE	Adjust the balance between the rear left and right speakers (You can adjust from centre 6 steps left or right).

■LEVEL

You can vary the level of each speaker as follows. Be sure to set “TEST TONE” to “ON” for easy adjustment.
The default settings are underlined.

CENTER 0 dB	Adjusts the level of the centre speaker (–10 dB to +10 dB, 1dB increments).
REAR 0 dB	Adjusts the level of the rear speakers (–10 dB to +10 dB, 1dB increments).
SUBWOOFER 0 dB	Adjusts the level of the subwoofer (–10 dB to +10 dB, 1dB increments).

To adjust the volume of all the speakers at one time

Use the VOLUME control.

■TEST TONE

The speakers will emit a test tone to adjust “BALANCE” and “LEVEL.” The default setting is underlined.

OFF	The test tone is not emitted from the speakers.
ON	The test tone is emitted from each speaker in sequence while adjusting balance or level. When you select one of the “SPEAKER SETUP” items, the test tone is emitted from both left and right speakers simultaneously.

Adjusting the speaker volume and level

1 **After you stop playback, select "SPEAKER SETUP" after pressing DVD SETUP in the Setup Display.**

2 **Select "TEST TONE" and set "TEST TONE" to "ON."**
You will hear the test tone from each speaker in sequence.

3 **From your listening position, select "BALANCE" or "LEVEL" and adjust the value of "BALANCE" and "LEVEL" using ↑/↓.**
The test tone is emitted from both left and right speakers simultaneously.

4 **Select "TEST TONE" and set "TEST TONE" to "OFF" to turn off the test tone.**

Note

When you adjust the speaker settings, the sound cuts off for a moment.

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power is not turned on.

➡ Check that the AC power cord (mains lead) is connected securely.

Picture

There is no picture.

➡ The connecting cords are not connected securely.
➡ The connecting cords are damaged.
➡ The receiver is not connected to the correct TV input jack (page 21).
➡ The video input on the TV is not set so that you can view pictures from the receiver.

Picture noise appears.

➡ The disc is dirty or flawed.
➡ If the picture output from your receiver goes through your VCR to get to your TV, the copy-protection signal applied to some DVD programmes could affect picture quality.

Even though you set the aspect ratio in "TV TYPE" of "SCREEN SETUP," the picture does not fill the screen.

➡ The aspect ratio of the disc is fixed on your DVD.

The picture is black and white.

➡ Depending on the TV, the picture on the screen becomes black and white when you play a disc recorded in the NTSC colour system.

Sound

There is no sound.

➡ The connecting cord is not connected securely.
➡ The connecting cord is damaged.
➡ Press MUTING on the remote if "MUTING ON" is displayed on the front panel display.
➡ The protective device on the receiver has been activated because of a short circuit. Turn off the receiver, eliminate the short-circuit problem and turn on the power again.
➡ The audio connecting cord is damaged. Replace it with a new one.
➡ The receiver is in pause mode or in Slow-motion Play mode. Press ▷ to return to normal play mode.
➡ Fast forward or fast reverse is performed. Press ▷ to return to normal play mode.
➡ Check the speaker settings (pages 23, 68).

The left and right sounds are unbalanced or reversed.

➡ Check that the speakers and components are connected correctly and securely.
➡ Adjust the front balance parameter in the LEVEL menu (pages 26, 70).

Severe hum or noise is heard.

➡ Check that the speakers and components are connected securely.
➡ Check that the connecting cords are away from a transformer or motor, and at least 3 meters (10 feet) away from a TV set or fluorescent light.
➡ Move your TV away from the audio components.
➡ The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.
➡ Clean the disc.

The sound loses stereo effect when you play a VIDEO CD, or a CD.

➡ Set "AUDIO" to "STEREO" in the Control Menu display (page 44).
➡ Make sure you connect the receiver appropriately.

The surround effect is difficult to hear when you are playing a Dolby Digital sound track.

➡ Make sure the sound field function is on (page 46).
➡ Check the speaker connections and settings (pages 16, 23, 68).
➡ Depending on the DVD, the output signal may not be the entire 5.1 channels. It may be monaural or stereo even if the sound track is recorded in Dolby Digital format.

The surround effect is difficult to hear when you are playing a Dolby Digital or MPEG audio sound track.

➡ Check the speaker connections and setting (pages 16, 23, 68).
➡ Depending on the DVD, the output signal may not be the entire 5.1 channels. It may be monaural or stereo even if the sound track is recorded in Dolby Digital or MPEG audio format.

The sound comes from the centre speaker only.

➡ Depending on the disc, the sound may come from the centre speaker only.

No sound is heard from the centre speaker.

➡ Make sure the sound field function is on (page 46).
➡ Select a sound field containing the word “cinema” or “virtual” (page 46).

No sound or only a very low-level sound is heard from the rear speakers.

➡ Make sure the sound field function is on (page 46).
➡ Select a sound field containing the word “cinema” or “virtual” (page 46).

Operation

Radio stations cannot be tuned in.

➡ Check that the antennas are connected securely. Adjust the antennas and connect an external antenna if necessary.
➡ The signal strength of the stations is too weak (when tuning in with automatic tuning). Use direct tuning.
➡ No stations have been preset or the preset stations have been cleared (when tuning by scanning preset stations). Preset the stations (page 28).
➡ Press DISPLAY so that the frequency appears on the front panel display.

The remote does not function.

➡ There are obstacles between the remote and the receiver.
➡ The distance between the remote and the receiver is too far.
➡ The remote is not pointed at the remote sensor on the receiver.
➡ The batteries in the remote are weak.

The disc does not play.

➡ There is no disc inside.
➡ The disc is turned over.
Insert the disc with the playback side facing down on the disc tray.
➡ The disc is skewed.
➡ The receiver cannot play CD-ROMs, etc. (page 7).
➡ The region code on the DVD does not match the receiver.
➡ Moisture has condensed inside the receiver. Remove the disc and leave the receiver turned on for about half an hour (page 3).

continued

The disc does not start playing from the beginning.

➡ Programme Play, Shuffle Play, or Repeat Play has been selected (pages 34-37).
Press CLEAR to cancel these functions before playing a disc.

➡ Resume Play has been selected.
During stop, press ■ on the receiver or the remote and then start DVD playback (page 31).

➡ The title, DVD or PBC menu automatically appears on the TV screen.

The receiver starts playing the disc automatically.

➡ The DVD features an auto playback function.

Playback stops automatically.

➡ Some discs may contain an auto pause signal. While playing such a disc, the receiver stops playback at the auto pause signal.

You cannot perform some functions such as Stop, Search, Slow-motion Play, Repeat Play, Shuffle Play, or Programme Play.

➡ Depending on the disc, you may not be able to do some of the operations above. See the operating manual that comes with the disc.

Messages do not appear on the screen in the language you want.

➡ In the Setup Display, select the desired language for the on-screen display in “OSD” under “LANGUAGE SETUP” (page 65).

The language for the sound track cannot be changed.

➡ Multilingual tracks are not recorded on the DVD being played.

➡ The DVD prohibits changing the language for the sound track.

The subtitle language cannot be changed.

➡ Multilingual subtitles are not recorded on the DVD being played.

➡ The DVD prohibits changing the subtitles.

The subtitle cannot be turned off.

➡ The DVD prohibits turning off subtitles.

The angles cannot be changed.

➡ Multi-angles are not recorded on the DVD being played. The angle can be changed only when the “ANGLE” indicator lights up on the front panel display.

➡ The DVD prohibits changing the angles.

The receiver does not operate properly.

➡ If static electricity, etc., causes the receiver to operate abnormally, press POWER on the receiver to turn the receiver off and then on again.

Nothing is displayed on the front panel display.

➡ Press DIMMER on the remote.

A 5-character service number is displayed on the screen and on the front panel display.

➡ The self-diagnosis function was activated. (See the table on page 75.)

The disc tray does not open and “LOCKED” appears on the front panel display.

➡ Contact your Sony dealer or local authorized Sony service facility.

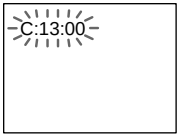
“PROTECT” appears on the front panel display.

➡ The speaker protection circuit is in function. Check the speaker connections.

Self-diagnosis Function

(When letters/numbers appear on the front panel display)

The self-diagnosis function is activated to prevent the receiver from malfunctioning. In this case a five-character service number (e.g., C 13 00) with a combination of a letter and digits appears on the screen and the front panel display. Refer to the following table.



First three characters of the service number	Cause and/or Corrective Action
C 13	The disc is dirty. ➡ Clean the disc with a soft cloth (page 8).
C 31	The disc is not inserted correctly. ➡ Re-insert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the receiver has performed the self-diagnosis function. ➡ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

Glossary

Bit rate

Value indicating the amount of video data compressed in a DVD per second. The unit is Mbps (Mega bit per second). 1 Mbps indicates that the data per second is 1,000,000 bits. The higher the bit rate is, the larger the amount of data. However, this does not always mean that you can get higher quality pictures.

Chapter

Sections of a picture or a music piece on a DVD that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want.

Digital Cinema Sound (DCS)

This is the generic name of the surround sound produced by digital signal processing technology developed by Sony. Unlike previous surround sound fields mainly directed at the reproduction of music, Digital Cinema Sound is designed specifically for the enjoyment of movies.

Dolby Digital

This sound format for movie theaters is more advanced than Dolby Pro Logic Surround. In this format, the rear speakers output stereo sound with an expanded frequency range and a subwoofer channel for deep bass is independently provided. This format is also called “5.1” because the subwoofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed). All six channels in this format are recorded separately to realize superior channel separation. Furthermore, since all the signals are processed digitally, less signal degradation occurs.

continued

Dolby Pro Logic Surround

As one method of decoding Dolby Surround, Dolby Pro Logic Surround produces four channels from two-channel sound. Compared with the former Dolby Surround system, Dolby Pro Logic Surround reproduces left-to-right panning more naturally and localizes sounds more precisely. To take full advantage of Dolby Pro Logic Surround, you should have one pair of rear speakers and a centre speaker. The rear speakers output monaural sound.

DTS

Digital audio compression technology that the Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround. The rear channel is stereo and there is discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio. The good channel separation is realized because all the channel data is recorded discrete and processed in digital.

DVD

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.
The data capacity of a single-layer and single-sided DVD, at 4.7 GB (Giga Byte), is 7 times that of a CD. Furthermore, the data capacity of a dual-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD 9.4 GB, and a dual-layer and double-sided DVD 17 GB.
The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 of its original size. The DVD also uses the variable rate coding technology that changes the data to be allocated according to the status of the picture.
The audio data is recorded in Dolby Digital as well as in PCM, allowing you to enjoy more real audio presence.
Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

Index (Super Audio CD/CD)/Video Index (VIDEO CD)

A number that divides a track into sections to easily locate the point you want on an Super Audio CD/CD or VIDEO CD. Depending on the disc, no index may be recorded.

Multi-angle function

Various angles, or viewpoints of the video camera for a scene are recorded on some DVDs.

Multilingual function

Several languages for the sound or subtitles in a picture are recorded on some DVDs.

Parental Control

A function of the DVD to limit playback of the disc by the age of the users according to the limitation level in each country. The limitation varies from disc to disc; when it is activated, playback is completely prohibited, violent scenes are skipped or replaced with other scenes and so on.

Playback Control (PBC)

Signals encoded on VIDEO CDs (Version 2.0) to control playback.
By using menu screens recorded on VIDEO CDs with PBC functions, you can enjoy playing simple interactive programmes, programmes with search functions, and so on.

Region Code

This receiver is used to protect copyrights. A region number is allocated on each DVD system or DVD disc according to the sales region. Each region code is shown on the receiver as well as on the disc packaging. The receiver can play the discs that match its region code. The receiver can also play discs with the "🌐" mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

Scene

On a VIDEO CD with PBC (playback control) functions, the menu screens, moving pictures and still pictures are divided into sections called "scenes."

Super Audio CD

This audio format is based upon the current audio CD standards but includes a greater amount of information which provides higher quality sound. There are three types of discs: single layer, double layer and hybrid discs. The hybrid disc contains both standard audio CD and Super Audio CD information.

Title

The longest sections of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software. Each title is assigned a title number enabling you to locate the title you want.

Track

Sections of a picture or a music piece on a CD or VIDEO CD. Each track is assigned a track number enabling you to locate the track you want.

VIDEO CD

A compact disc that contains moving pictures.
The picture data uses the MPEG 1 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/140 of its original size. Consequently, a 12 cm VIDEO CD can contain up to 74 minutes of moving pictures. VIDEO CDs also contain compact audio data. Sounds outside the range of human hearing are compressed while the sounds we can hear are not compressed. VIDEO CDs can hold 6 times the audio information of conventional audio CDs.
There are 2 versions of VIDEO CDs.

- Version 1.1: You can play only moving pictures and sounds.
- Version 2.0: You can play high-resolution still pictures and enjoy PBC functions.

This receiver conforms to both versions.

Specifications

Amplifier section

Stereo mode	50 W + 50 W (6 ohms at 1 kHz, THD 10 %)
Surround mode	Front: 50 W + 50 W
	Center*: 50 W
	Rear*: 50 W + 50 W (6 ohms at 1 kHz, THD 10 %)

* *Depending on the sound field settings and the source, there may be no sound output.*

Inputs (Analog)	ANALOG IN:
	Sensitivity: 150 mV
	Impedance: 50 kilohms
Inputs (Digital)	DIGITAL IN 1, 2 OPTICAL:
	Sensitivity: –
Outputs (Analog)	ANALOG OUT:
	Voltage: 2 V
	Impedance: 1 kilohms
	SUBWOOFER AUDIO OUT:
	Voltage: 3 V
	Impedance: 47 kilohms
	PHONES:
	Accepts low- and high-impedance headphones
Outputs (Digital)	DIGITAL OUT OPTICAL (CD)
	Sensitivity: –

Super Audio CD/DVD system

Laser	Semiconductor laser
	(Super Audio CD/DVD: λ = 650 nm)
	(CD: λ = 780 nm)
	Emission duration: continuous
Signal format system	NTSC/PAL
Frequency response (at 2 CH STEREO mode)	
	DVD (PCM): 2 Hz to 22 kHz (±1.0 dB)
	CD: 2 Hz to 20 kHz (±1.0 dB)
Signal-to-noise ratio	More than 80 dB (VIDEO 1 (AUDIO) connectors only)
Harmonic distortion	Less than 0.03 %

FM tuner section

System	PLL quartz-locked digital synthesizer system
North American model:	87.5 – 108.0 MHz (100 kHz step)
Other models:	87.5 – 108.0 MHz (50 kHz step)
Antenna	FM wire antenna
Antenna terminals	75 ohms, unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

System	Tuner section: PLL quartz-locked digital synthesizer system
Tuning range	
North American model:	530 – 1,710 kHz (with the interval set at 10 kHz) 531 – 1,710 kHz (with the interval set at 9 kHz)
European, Middle Eastern, and Philipinne models:	
	531 – 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna	Loop antenna
Intermediate frequency	450 kHz

Video section (EURO AV)

Inputs	Video: 1 Vp-p 75 ohms
Outputs	Video: 1 Vp-p 75 ohms

General

Power requirements	230 V AC, 50/60 Hz
Power consumption	105 W 1.5 W (in the standby mode)
Dimensions (approx.)	430 × 82.5 × 376 mm (17 × 3 1/4 × 14 7/8 inches) (w/h/d) incl. projecting parts
Mass (approx.)	4.3 kg (9 lb 8 oz)
Operating temperature	5˚C to 35˚C (41˚F to 95˚F)
Operating humidity	5 % to 90 %
Supplied accessories	See page 15.

Design and specifications are subject to change without notice.

Language Code List

For details, see pages 44, 52, 66.
The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1183	Irish	1347	Maori	1507	Samoan
1028	Abkhazian	1186	Scots Gaelic	1349	Macedonian	1508	Shona
1032	Afrikaans	1194	Galician	1350	Malayalam	1509	Somali
1039	Amharic	1196	Guarani	1352	Mongolian	1511	Albanian
1044	Arabic	1203	Gujarati	1353	Moldavian	1512	Serbian
1045	Assamese	1209	Hausa	1356	Marathi	1513	Siswati
1051	Aymara	1217	Hindi	1357	Malay	1514	Sesotho
1052	Azerbaijani	1226	Croatian	1358	Maltese	1515	Sundanese
1053	Bashkir	1229	Hungarian	1363	Burmese	1516	Swedish
1057	Byelorussian	1233	Armenian	1365	Nauru	1517	Swahili
1059	Bulgarian	1235	Interlingua	1369	Nepali	1521	Tamil
1060	Bihari	1239	Interlingue	1376	Dutch	1525	Telugu
1061	Bislama	1245	Inupiak	1379	Norwegian	1527	Tajik
1066	Bengali; Bangla	1248	Indonesian	1393	Occitan	1528	Thai
1067	Tibetan	1253	Icelandic	1403	(Afan)Oromo	1529	Tigrinya
1070	Breton	1254	Italian	1408	Oriya	1531	Turkmen
1079	Catalan	1257	Hebrew	1417	Punjabi	1532	Tagalog
1093	Corsican	1261	Japanese	1428	Polish	1534	Setswana
1097	Czech	1269	Yiddish	1435	Pashto; Pushto	1535	Tonga
1103	Welsh	1283	Javanese	1436	Portuguese	1538	Turkish
1105	Danish	1287	Georgian	1463	Quechua	1539	Tsonga
1109	German	1297	Kazakh	1481	Rhaeto-Romance	1540	Tatar
1130	Bhutani	1298	Greenlandic			1543	Twi
1142	Greek	1299	Cambodian	1482	Kirundi	1557	Ukrainian
1144	English	1300	Kannada	1483	Romanian	1564	Urdu
1145	Esperanto	1301	Korean	1489	Russian	1572	Uzbek
1149	Spanish	1305	Kashmiri	1491	Kinyarwanda	1581	Vietnamese
1150	Estonian	1307	Kurdish	1495	Sanskrit	1587	Volapük
1151	Basque	1311	Kirghiz	1498	Sindhi	1613	Wolof
1157	Persian	1313	Latin	1501	Sangho	1632	Xhosa
1165	Finnish	1326	Lingala	1502	Serbo-Croatian	1665	Yoruba
1166	Fiji	1327	Laothian	1503	Singhalese	1684	Chinese
1171	Faroese	1332	Lithuanian	1505	Slovak	1697	Zulu
1174	French	1334	Latvian; Lettish	1506	Slovenian		
1181	Frisian	1345	Malagasy			1703	Not specified

DVD Setup Menu List

You can set the following items with the DVD setup menu.
The order of the displayed items may be different from the actual display.

LANGUAGE SETUP

- OSD — (Select the language you want to use from the displayed language list.)
- DVD MENU — (Select the language you want to use from the displayed language list.)
- AUDIO — (Select the language you want to use from the displayed language list. When you select ORIGINAL, you can enjoy the language given priority on the disc.)
- SUBTITLE — (Select the language you want to use from the displayed language list. When you select AUDIO FOLLOW, the setting is automatically switched to the language selected in AUDIO.)

CUSTOM SETUP

- LINE
  - VIDEO
  - RGB
- PAUSE MODE
  - AUTO
  - FRAME
- PARENTAL CONTROL
  - LEVEL
    - OFF
    - 8.
    - 7. NC17
    - 6. R
    - 5.
    - 4. PG13
    - 3. PG
    - 2.
    - 1. G
  - STANDARD
    - USA
    - OTHERS
  - CHANGE PASSWORD
- TRACK SELECTION
  - OFF
  - AUTO

SCREEN SETUP

- TV TYPE
  - 16:9
  - 4:3 LETTER BOX
  - 4:3 PAN SCAN
- SCREEN SAVER
  - ON
  - OFF
- BACKGROUND
  - JACKET PICTURE
  - GRAPHICS
  - BLUE
  - BLACK

SPEAKER SETUP

- SIZE
  - FRONT
    - LARGE
    - SMALL
  - CENTER
    - LARGE
    - SMALL
    - NONE
  - REAR
    - LARGE
      - BEHIND,LOW
      - BEHIND,HIGH
      - SIDE,LOW
      - SIDE,HIGH
    - SMALL
      - BEHIND,LOW
      - BEHIND,HIGH
      - SIDE,LOW
      - SIDE,HIGH
    - NONE
  - SUBWOOFER — YES/NONE
- DISTANCE**
  - FRONT — 1m ~15m
  - CENTER — 0m ~15m
  - REAR — 0m ~15m
- BALANCE
  - FRONT — 6 steps left or right
  - REAR — 6 steps left or right
- LEVEL
  - CENTER — –10dB ~ +10dB
  - REAR — –10dB ~ +10dB
  - SUBWOOFER — –10dB ~ +10dB
- TEST TONE
  - OFF
  - ON

Index

Numerics
16:9 66
4:3 LETTER BOX 66
4:3 PAN SCAN 66

A
ADVANCED 53
AMP MENU 24
ANGLE 51
Antenna Hookups 19
AUDIO 44, 65

B
BACKGROUND 67
BALANCE 26, 70
BAND 28
Batteries 16
Bit rate 53, 75

C
CD 30
CHAPTER 39
Chapter 6, 75
Continuous play
  CD/VIDEO CD/Super Audio CD/DVD 30
Control Menu 13
CUSTOM PARENTAL CONTROL 54
CUSTOM SETUP 67

D
DIMMER 27
DISTANCE 25, 69
Dolby Digital 75
Dolby Pro Logic Surround 76
DTS 76
DVD 32, 76
DVD MENU 32, 65

F
Front Panel 9
Fast forward 38
Fast reverse 38
Front panel display 10

H
Handling discs 8

I
INDEX 39
Index 6

L
LANGUAGE SETUP 65
LEVEL 27, 70
Locating
  a specific Point 39
  by watching the TV screen 38

M
MEMORY 28
Multi-angle function 51
Multilingual function 44
MUTING 31

N
NAME 63

O
On-screen display
  Control Menu display 13
  Setup Display 64
OSD 65

P
PARENTAL CONTROL 55, 68, 76
PAUSE MODE 68
PBC Playback 33, 76
PLAY MODE 34
Preset Station 28, 61
Programme Play 34

Q
Quick Overview 15

R
Radio 61
RDS 62
Rear Panel 11
Region code 7, 77
Remote 12, 59
REPEAT 36
RESET 65
Resume Play 31

S
Super Audio CD 77
Scan 38
SCENE 39
Scene 6, 77
SCREEN SAVER 67
SCREEN SETUP 66
SHUFFLE 36
Shuffle Play 36
SIZE 68
Slow-motion Play 38
Sound Field 46
SPEAKER SETUP 68
Speaker System Hookup 16
SUBTITLE 52, 65

T
TEST TONE 70
TIME SEARCH 40
TIME 41
TIME/TEXT 40
TITLE 39
Title 6, 77
Title menu 32
TRACK 39
Track 6, 77
TRACK SELECTION 68
Troubleshooting 72
TV Hookups 21
TV TYPE 66

U
Usable discs 6

V
VIDEO CD 33, 77

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